Expanding architectural practice to advance social justice: Social architecture creates equitable shelter

by

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A thesis submitted to the graduate faculty

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Architecture

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Iowa State University

Ames, Iowa

2013

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DEDICATION

This paper is dedicated to colleagues and friends at the Emergency Residence Project and Engineering Ministries International India, the organizations striving to create equitable shelter that inspired this research.

It is additionally dedicated to the people who believed in the cause of the exhibition and demonstrated their support by freely donating their time, talents and resources. The project would not have happened without them.

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NOMENCLATURE

2x4	1 ½” by 3 ½” piece of lumber
AFH	Architecture for Humanity
CoD	Iowa State College of Design
DaB	Design Across Boundaries
EMI2	Engineering Ministries International India
ERP	The Emergency Residence Project
IRB	Institutional Review Board
ISU	Iowa State University
LF	Linear Foot
MoMA	Museum of Modern Art in New York City
MU	Memorial Union Building at Iowa State University
SEED	Social, Economic and Environmental Design
SF	Square Foot
VEISHEA	Annual Spring Festival at Iowa State University

ACKNOWLEDGEMENTS

My thanks are due first to my major professor, Nadia Anderson, for her steadfast support of my endeavors and the example that she has set for me within our field. Thanks are also due to Cindy Gould, a committee member and exhibition designer extraordinaire that so generously invested in the success of this project. Thank you, also, to my committee members Karen Jeske and Patience Lueth, each of you played an important role in the process of the research.

In addition, I would like to thank the Dean's Office of the Iowa State College of Design for endorsing the exhibition and offering consistent assistance. Colleagues within the Office of Event Management were also a pleasure to work with; thank you for helping to make the exhibition happen from the moment it was within your control. To all of the participating parties, thank you for your partnership in this investigation of equitable shelter. I especially would like to thank the artists that donated work and the volunteers that gave hours of their time—this project could not have happened without your involvement.

Lastly, I would like to thank my friends and family for their constant encouragement. To my boyfriend, Simon, thank you for your belief in me, your prayers and your unwavering commitment to the success of this project.

ABSTRACT

Architectural practice possesses potential to advance social justice. Social architecture is a movement within the profession currently employing inclusive, participatory and proactive modes of practice. Each of these modes of architectural practice was investigated alongside frameworks from sociology regarding social justice, including spatial justice, empathetic empowerment and equity. In order to synthesize these two bodies of literature, an investigation was conducted at Iowa State University in April 2013 in the form of an art exhibition. This project employed the three primary modes of the social architecture movement while exploring the meaning and social impact of "equitable shelter" through two surveys. The phrase "equitable shelter" was derived in an attempt to establish a potential output of architectural practice that could be used to evaluate whether or not architects in the emergent social architecture movement were indeed advancing social justice.

The output that emerged from the surveys concluded that "equitable shelter is an environment that ensures the safety of inhabitants and protection from the elements, acting as a gateway to the satisfaction of basic needs, self-actualization, self-expression and self-direction." This output was determined to be both a product and a system that facilitates social justice because it aligns with respected theories on the nature of social justice. The design of the exhibition employed the inclusive, participatory and proactive modes of practice espoused by the social architecture movement. The output of the exhibition, "equitable shelter," was shown to relate to the social justice frameworks of

spatial justice, empathetic empowerment and equity. These relationships demonstrated that each mode of practice helps create equitable shelter and therefore social justice. The social architecture movement has expanded the profession to fulfill its potential by advancing social justice.

CHAPTER I: INTRODUCTION

"The practice of architecture is inherently social, weaving together the needs of patrons, users, and the greater community to create usable, beautiful spaces in the built environment" (Wilson 30). Architecture has historically been a vehicle of cultural production. As globalization and technology pushed the world into the twenty-first century, architects and designers became increasingly conscious of their ability to promote justice within their social climate. What has emerged is a humanitarian movement among designers that emphasizes addressing the globe's most pressing issues through design solutions. In contemporary publications this approach to architectural practice is typically referred to as "public-interest design" or "social architecture." This movement will be discussed as social architecture because of its parallel with social justice and because each of these fields addresses the way that society is organized from different perspectives. The work in this field is changing communities, and its leaders are broadening the architectural profession as a whole to entail inclusive, participatory and proactive design.

Two topics in the literature were reviewed to test the relationship between architectural practice and sociological frameworks on social justice, ultimately aspiring to answer the question, "How can the practice of architecture be expanded to advance social justice?" This analysis revealed that inclusive, participatory and proactive modes

of practice are each uniquely related to three key areas of social justice theory: spatial justice, empathetic empowerment and equity, respectively.

To better understand social architecture's capacity to advance justice, an action-based research investigation was conducted. This took the form of an interactive art exhibition entitled FO(u)R WALLS held at Iowa State University (ISU) in April 2013. The project instigated a collective investigation of the term *equitable shelter*, a phrase conceptualized by the exhibition coordinator in conjunction with the hypothesis that this concept could help evaluate architectural practice and answer the research question. The exhibition involved hundreds of participants, physical and non-physical materials and two surveys that were designed to discover the meaning and social impact of equitable shelter.

Informed by this review and the survey results from the exhibition, a definitive meaning for equitable shelter was established in order to clarify its ability to advance social justice. "*Equitable shelter* is an environment that ensures the safety of inhabitants and protection from the elements, acting as a gateway to the satisfaction of basic needs, self-actualization, self-expression and self-direction." This conclusion aligned closely with the literature on social justice, demonstrating that equitable shelter as both a product and a system advances social justice.

This discovery offered an additional tool by which to evaluate inclusive, participatory and proactive means of architectural practice. Though inclusive practice aligned with spatial justice, participatory practice with empathetic empowerment and proactive practice with equity, each of these theoretical parallels were analyzed through

the real world experience of the exhibition to determine if they helped produce equitable shelter. The conclusion of this analysis was that each of these practices demonstrated by socially-conscious architects does lead to equitable shelter and ultimately social justice. The field of social architecture is expanding architectural practice by defining new standards that successfully weave public needs into equitable shelter.

CHAPTER 2: LITERATURE REVIEW

The primary research question, "How can architectural practice expand to advance social justice?" warranted the exploration of two bodies of literature: social architecture and social justice theory.

The literature on social architecture is a subset of overall writings on architectural practice, which Dana Cuff defined as "the everyday world of work where architecture takes shape" (Cuff 1). Those who are practicing within this emerging field demonstrate a variance from traditional practice, which relied heavily on a fee-for-service model where an architect only performs duties when employed by a client. Three types of practice have surfaced from both literature and the examples of assorted projects: inclusive, participatory and proactive. Though it is impossible to completely detach each of these practices from each other, they each embody distinct ideas and have produced projects that validate them, some of which are also discussed below.

The social science literature on social justice was also reviewed in order to evaluate how architecture could help generate social justice. The three key areas covered include theoretical frameworks on the nature of justice, privilege in comparison with empathetic empowerment and equality in comparison with equity. These systems are intertwined, just like social architectural practices, but studying each of these areas clarifies its place within the overall web of social justice.

By reviewing both inclusive, participatory and proactive modes of practice within social architecture and the social justice theories of spatial justice, empathetic

empowerment and equity, unique correlations were discovered that informed the final conclusions of this research endeavor.

Social Architecture

Architecture has traditionally been defined by clients with both desire and ability to pay for the services of design professionals. The stereotypical view of an architect was one who individually worked late nights at the drawing board to produce masterpieces that could woo more commissions (Cuff 13). This view of practice, common even from within, began to expand when architects started to exercise their talents collectively. The profession gained new forms of practice by including people traditionally excluded from design, engaging end-users in design processes and proactively addressing problems that were relevant in their societies. These methods, for the sake of discussion, are referred to as inclusive, participatory and proactive practice.

Contemporary Founding

Social-consciousness within architecture represents a divergence from traditional practice. Tied to a fee-for-service model, traditional practice has generally revolved around solving design problems defined by people with money and/or power. This conception of architecture differs from the social architecture movement, which has increased designers' attention to collective processes that generate justice for all and not simply the production of buildings.

In a research project that involved the daily study of three architecture firms near San Francisco and dozens of interviews with American architects, Dana Cuff proposed that architecture was a social art. Published in 1991, *Architecture: The Story of Practice* concluded that the historical image of an architect as an individual artist was outdated. Though some buildings do still rely on the genius of a particular architect's creativity, the built environment, she argued, stems from communal effort.

> The fundamental point is a simple one: the design of our built environment emerges from collective action. Typically design is believed to be an individual's creative effort, conjuring up images of late nights at the drawing board. Indeed, this is a significant part of making buildings, but it is not sufficient to explain the design process. (Cuff 13)

Cuff claimed that an attention to the process of design, rather than the traditional product, buildings, had only recently attracted attention (Cuff 15). Contending that "the production of places is a social process," influenced by participants both inside and outside of an architectural office and realized via day-to-day processes like phone calls and contract negotiations (Cuff 248), Cuff's work helped lay a foundation for the social movement in architecture.

Inclusive Practice

The twenty-first century globe has been connected through technology and high-speed travel in an unprecedented manner. Architects today have direct access to people who have never before been able to connect with or afford professional designers.

Expanding practice to serve these people through design solutions is the premise of inclusive practice.

Many leaders in the social architecture movement have written about the importance of incorporating inclusivity into architectural practice. In *World Designs to End Poverty,* Cynthia E. Smith emphasized that the design professions are experiencing a dramatic shift towards social responsibility because of globalization. Smith explained that various new technologies have made collaboration possible across national borders, including the internet, e-mail, broader telecommunication services and open-source information networks. Thanks to these systems and the increasingly globalized economy, "designers can now provide services to people who would not have received them before" (Smith 16). Direct partnerships with end-users, like low-income communities in developing countries, are creating appropriate solutions that users can replicate and expand. "By working directly with the end-users to determine what their needs are, designers are developing low-cost technologies which promote local economic growth and a way out of poverty" (Smith 11).

These ideas are paralleled by Bryan Bell, the founder of Design Corps, a non-profit design organization that advances justice through design (Design Corps). In the preface to *Expanding Architecture: Design as Activism,* an anthology that Bell compiled to draw attention to the increasing number of socially-conscious architects, he addressed designers across disciplines in a plea that they select clients from a wider breadth of backgrounds.

> "…currently the opportunity to create a built environment is reserved only for the very few, the elite, the highest income bracket served to excess by market forces. Designers have let these market forces alone determine whom we serve, what issues we address, and the shape of all our design professions: architecture, graphic design, industrial design, planning, and interior design." (Bell, "Expanding Design" 15)

In the foreward to Sergio Palleroni's *Studio at Large: Architecture in Service of Global Communities,*which features numerous student design projects conducted by Palleroni's Global Community Studios at the University of Washington, Bell reiterates these ideas. Capitalizing on the difference such projects make for impoverished communities, Bell commented that the studios help expand the commonly held perception of architecture beyond "a privilege reserved for the few" (Bell, Foreward ix). These endeavors aim to make architecture students "global citizens" by equipping them with hands-on experience in cross-cultural design projects (Palleroni xiii). Palleroni identifies this type of work as "social architecture," teaching students in professional design programs that this is a vital part of their profession.

Like Palleroni, Bell also demonstrates a commitment to advancing inclusive design through young professionals. In 1991, Bryan Bell founded the Design Corps as a subdivision of the AmeriCorps national service program. This organization's mission is to "provide the benefits of architecture to those traditionally un-served by the profession," which it accomplishes by offering young designers opportunities to participate in real world design-build projects each summer (Design Corps). Bell is

passionate about teaching the next generation about the impact they can make through socially-responsible design. “Architecture has so much unrealized potential; architects could solve substantial social needs worldwide, addressing issues that seem beyond the impact of design or building, such as education, health, employment, self-empowerment, and cultural identity” (Bell, Foreward ix).

Figure 1. Pew made by Design Corps architects out of 19th-century cypress that was reclaimed from a home in the Ninth Quarter of New Orleans after Hurricane Katrina from Brad Deal; "From Katrina Wreckage to Workshop."(Time, 26 April 2007.) Web, 7 July 2013.

The social impact of Design Corps’ early projects quickly attracted the attention of the professional design community. As news spread beyond Bryan Bell’s office in Raleigh, North Carolina, a coalition of socially-minded designers was formed: The Social, Economic, and Environmental Design (SEED) Network (Design Corps).

Conceived at a meeting between thirty architects and designers in the fall of 2005, this network heavily encourages the principles of inclusive practice.

The SEED Network hosted their first official meeting in February of 2006 in New Orleans and set forward a mission that demonstrates these principles, advancing "the right of every person to live in a socially, economically, and environmentally healthy community" (Wilson 29). Multiple projects around the globe have been driven by the SEED network ever since, beginning with a project entailing the creative reuse of storm strewn materials in response to the damage from Hurricane Katrina (see figure 1). Architects affiliated with SEED continue to discuss the priorities and direction of the organization in an annual conference called Structures for Inclusion, ensuring that their collective work will continue to direct professionals to include everyone in the design processes that shape their environment.

Participatory Practice

In addition to inclusive practice, another method modeled within the social movement in architecture is participatory practice. This is a tenet promoted by the SEED Network, which they define as "trusting the local" (Wilson 30). In her article exploring the relationship between justice and design, Barbara B. Wilson explains that this theory entails pairing expert and local knowledge, the "most effective way to sustain the health and longevity of a place" (Wilson 30). Wilson elaborates that involving the beneficiaries of design in the process of design is an empowering process. "In the context of social architecture, practitioners work with community members to build their neighborhood's

political and social capacity, empowering participants with the design tools needed to shape their surroundings" (Wilson 31).

In *Toward a Humane Environment: Sustainable Design and Social Justice*, Lance Hosey reinforces Wilson's views that this method of practice is advantageous for the recipients of design. Hosey discusses the urgency of the United Nations Millennium Development Goals and emphasized that a "new culture of design" will be necessary to achieve them. "Designers can benefit the global community by reconsidering the purpose, process, and products of design all at once" (Hosey 36). Within this new culture, the design product should serve while the design process should empower.

Gamez and Rogers also advocate that design-users drive design. They explain that socially-conscious designers are grounded in their communities and engaging the public in "participatory architecture," working via "collaborative and dialectical relationships with citizens to imagine new possibilities, processes, and implementation strategies that challenge traditional methods and market norms" (Gamez and Rogers 24). The authors expound that participatory designers must engage diverse opinions and be grounded in the real-life influences that shape their projects both in academia and in practice. If architects fail to engage the people that their buildings service, Gamez and Rogers warn that "the polarization emerging around the globe will continue; the twenty-first century will be defined by a paradigm of access to space through division; and the tools for transforming space will become increasingly concentrated in the hands of the few" (Gamez and Rogers 25).

Democratic design processes have also been heavily emphasized in the field of community and regional planning. Randy Stoecker, a community development expert at the University of Wisconsin, recently released a guide for his fellow planners on participatory project design. Addressing professionals in public health, social service and academia, Stoecker claimed that "the greatest contribution we as professionals can make is to literally work ourselves out of a job—to create opportunities for those normally shut out of access to skills, leadership, and self-confidence to achieve those goals so that we are no longer central or controlling" (Stoecker 21). The theme of his book runs parallel to Hosey's thoughts—building the capacity of community members goes hand in hand with shaping their built environment. "[Community development] is about both building the house and building the capacity of the people to build the house and control it" (Stoecker 50).

The Rural Studio of Auburn University is just one example of an architectural community that is exercising participatory design methods. The Rural Studio was founded by Samuel Mockbee and D.K. Ruth in 1993 as a real world, design-build program to transform design students into "Citizen Architects." In service to low-income families and entire communities throughout west-central Alabama, "the students work within the community to define solutions, fundraise, design and, ultimately, build remarkable projects. The Studio continually questions what should be built, rather than what can be built, both for the performance and operation of the projects" (Rural Studio). Because the Rural Studio is funded by the academic system, students complete these projects at no cost to the beneficiaries, generating boys and girls clubs, libraries,

pavilions and private residences with the input of the people who will use them regardless of their ability to afford professional design services.

Participatory Exhibitions

Examples of participatory practice have been modeled by other academic institutions and private organizations in the form of exhibitions. The following three exhibitions were studied before the FO(u)R WALLS exhibition was designed in order to glean their strengths and learn from their weaknesses.

Transforming Communities: Design in Action

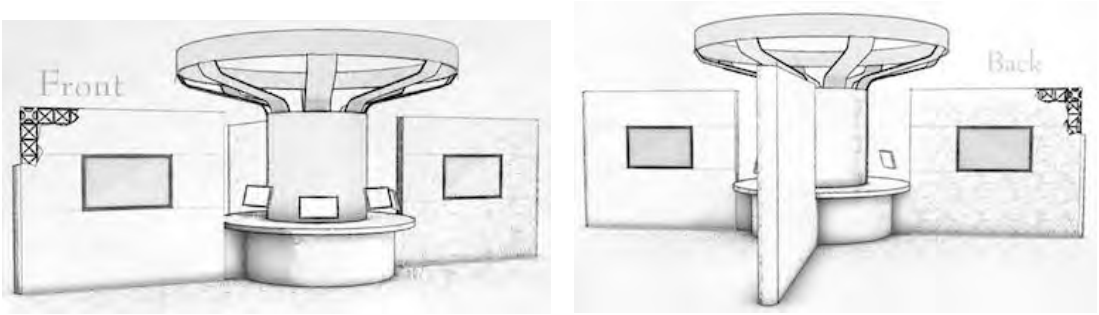
ISU College of Design and Office of Extension and Outreach

Washington D.C.

June 2012 – July 2012

This exhibition featured an interactive display emphasizing the role of design in solving complex problems that communities face. It was featured in the United States capital for ten days alongside many other displays in the Smithsonian Folklife Festival, which celebrated the 150 year old relationship of the land grant universities, United States department of Agriculture (USDA) and communities. While visiting Iowa State in March of 2012, the Festival Technical Director Robert Schneider explained that the Festival was designed to instigate conversations. “An exhibit's built environment is a backdrop to the dialogue, a way of bringing people in to the activities and personal interactions" (Iowa State University). The Iowa State display created these opportunities

for interaction via touchscreens and LED monitors, engaging both adults and children in games that required design thinking (see figures 2 and 3). Based on the documentation online, this exhibition did not appear spatially engaging, but it did utilize interactive components that facilitated hands-on learning, a factor that influenced the design-user survey within FO(u)R WALLS.



Figures 2 and 3. Renderings of the Design in Action display from Iowa State University; "Iowa State will be on display at the Smithsonian Folklife Festival this summer." (ISU News Service, 5 April 2012.) Web, 10 October 2012.

Small Scale, Big Change: New Architectures of Social Engagement

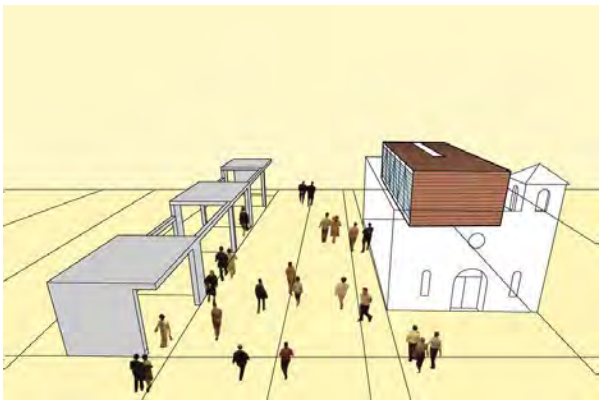
Museum of Modern Art

New York City, NY

October 2010 – January 2011

The Museum of Modern Art (MoMA) in New York City featured eleven projects in an exhibition that covered five continents. The featured designers were appraised for the positive effect that they had on the communities where they worked: branching beyond a traditional client base, employing participatory design methods and acting as

"partners in social, economic and political transformation" (Museum of Modern Art). An example of the type of projects that were featured is Teddy Cruz's work along the California-Mexico border entitled "Casa Familiar: Living Rooms at the Border and Senior Housing with Childcare." The ongoing project is based on the architect's vision of two-story living environments that free the ground floor for multi-purpose, collective use. The museum featured drawings, renderings, cartoons, diagrams and descriptions of the project (see figures 4 and 5). Though the site featuring this exhibition did not boast interactive components, the fact that this high-profile museum highlighted participatory projects demonstrated the impact that participatory practice is making in communities across the globe.



Figures 4 and 5. Renderings from Living Rooms at the Border from the Museum of Modern Art; "Small Scale Big Change: New Architectures of Social Engagement." (Museum of Modern Art, 2010.) Web, 16 October 2012.

Reflection Art Gallery & Studios

New Delhi, India

Workshops

2004 – present

The Reflection Art Gallery & Studios in New Delhi is a non-profit organization that freely displays artwork for the general public (Koeniger). The artwork is donated by local artists and collected through monthly community workshops known as "Creative Conscience Workshops" or "Workshops for the Marginalized." Both types of workshops consist of either a day or a week's worth of learning and creating based around a theme. Past themes include hope, disparity, violence against women and youth in slum settlements, which actually involved young men and women living in informal settlements (see figures 6 and 7). All artwork is inevitably sold to financially sustain the gallery (Reflection Art Gallery & Studios). Though this example primarily focuses on how the visual arts respond to social inequity, it offers cross-disciplinary lessons on how to learn from people who do not live in socially just environments in place of "fixing" their problems.

Figures 6 and 7. Photographs from the Workshop for Youth from Slum Settlements from Reflection Art Gallery & Studios; "Workshops." (Reflection Art Gallery & Studio, 2008.) Web, 4 December 2012.

Proactive Practice

Though it is impossible to completely disentangle proactive from participatory and inclusive practices, this method offers further definition to social architecture. In contrast to traditional practice, proactive architects broaden the scope of their services beyond buildings and offer design solutions regardless of financial or reputational incentives.

In Bryan Bell's first anthology, *Good Deeds, Good Design: Community Service through Architecture*, a couple of authors set forward various designations of architectural practice that relate to proactive methods. "Activist practice," proposed by Roberta M. Feldman, refers to architects proactively identifying and solving a design need in their community even if it is something other than designing a building. "Operative practice," defined by Jason Pearson, refers to creative, intentional action that leads to lasting change. Both of these descriptions highlight the social impact of architects proactively offering design.

As Bell describes this facet of social architecture, proactive designers seek out problems to solve in place of buildings to design.

> "To make design more relevant is to reconsider what design issues are. Rejecting the limits we have defined for ourselves, we should instead assume that design can play a positive role in seeking answers to many different kinds of challenges. We have limited our potential by seeing most major human concerns as unrelated to our work." (Bell, "Expanding Design" 15)

Thomas Fisher, a leading advocate of "public-interest architecture," extends Bell's argument by criticizing architects for working primarily on design issues brought forward by the wealthy—individuals, corporations, institutions and governments. This pattern causes design to react primarily to the concerns of the rich instead of proactively engaging the concerns of those without access to professionals. "Architects directly affect only about two to five percent of all that gets built, which hardly makes a dent in the requirement that we, as licensed professionals, attend to the public's health, safety, and welfare" (Fisher 9). Fisher is known for his views that architects should play a role in securing the public welfare similar to that of a public defense attorney or public health provider. "Architects need to make the case—with the research to back it up—for a parallel public commitment to ensure that every person has affordable housing and access to essential services" (Fisher 13). Though Fisher's views are not commonplace among socially-conscious designers, the realization of his vision would require a proactive, political approach to architectural practice.

Gamez and Rogers reflect Fisher's views in regards to architects exercising political engagement. They argue that architecture itself is political. The "architecture of change" that they advocate for is "an architecture that moves the field beyond design of buildings and toward the design of new processes of engagement with the political forces that shape theories, practices, academies, policies, and communities" (Gamez and Rogers 18). The authors explain that staking a claim in politics is risky because architects can lose clients over divergent ideas. This causes architects to exchange bold, core values that could benefit their communities for political disengagement.

Architectural education especially, they explain, has a role to play in producing progressive and inclusive design strategies for community development. “In the task of transforming the architectural profession into a socially and politically relevant field, the academy must be considered a front-line combatant, strategizing the attack in collusion with the people on the ground who at this moment are leading the insurrection” (Gamez and Rogers 23). By taking a stance on the needs in their communities, practitioners and academics alike would be empowered to proactively solve problems without wealthy patrons.

Teddy Cruz and the non-profit organization he partners with called Casa Familiar, mentioned above for their work featured in the MoMA exhibition, are leaders in this arena. Casa Familiar proactively studies communities along the border between the USA and Mexico in order to find solutions to existing problems. Working from the perspective of the neighborhood, Cruz contends that non-profits and non-government organizations (NGOs) like his own comrades should be intermediaries between the public and the municipality—activists that “transform the top-down legislature and lending structures in order to generate a new brand of bottom-up social and economic justice that can bridge the political equator” (Cruz 213). Cruz’s design team does not wait for communities to approach them, but rather seeks out problems to solve.

Another organization that forthrightly creates solutions to problems is Architecture for Humanity (AFH). Founded in 1999 by Cameron Sinclair and Kate Stohr of New York City, this international organization is comprised of local chapters in more than fifty cities (Architecture for Humanity), each one devoted to seeking “architectural

solutions to humanitarian crises and bringing design services to communities in need" (Sinclair 11). AFH was founded in response to an ethnic uprising in Kosovo that displaced thousands of people. Their initial project was an international design competition for refugee housing. The competition attracted 220 design teams from 30 countries (Sinclair 12), and though only a handful of firms were recognized by the competition jury, "a number of designers pushed forward with developing projects on their own" (Sinclair 22). This is a clear example of proactive design. Not a single refugee from Kosovo employed these designers. Socially-conscious architects simply identified a problem, devised design solutions and implemented their ideas, advancing the cause of social architecture in the process (see figures 8 and 9).

Figures 8 and 9. Photograph from the 1999 Jury for the Kosovo Transitional Housing Competition, Nakamura and Koike's Competition Entry from Architecture for Humanity; "Competitions." (Architecture for Humanity, 2013.) 1 July 2013.

Social Justice

Social architecture is broadening the profession holistically by increasing the value of inclusive, participatory and proactive design methods; and, leaders in the field recognize that partnerships with sociologists would be advantageous. As Fisher explained, "public-interest architecture" might have "closer ties with the academy—not just with architecture programs but also with scientists and social scientists who can help study the impact of our efforts" (Fisher 12). Besides simply partnering with social scientists to evaluate project outcomes, socially-conscious designers can evaluate their methods in light of conventional sociological frameworks like well-established theories of social justice, the importance of exchanging privilege for empathic empowerment and the difference between equality and equity.

Theoretical Frameworks of Justice

Justice is an age-old term connected to imagery of balanced scales, convicted criminals and highly esteemed civil leaders. "Since Plato, 'justice' has evoked the well-ordered society" (Young 35). Social justice embraces more, however, than fair governance; it is the mark of inclusive societies that realize the full potential of their citizens' collective strengths. This order is made evident when people are free to pursue individual ambitions without interference from their community. As Iris Young explains in *Displacing the Distributive Paradigm*, the values most associated with living a good life can be reduced to self-actualization, self-expression and self-direction. "Social

justice concerns the degree to which a society contains and supports the institutional conditions necessary for the realization of these values" (Young 37).

Theorists on the nature of social justice have identified three major categories that are used to classify the work of social justice activists: distributional justice, relational justice and, a hybrid of the other two, spatial justice. Iris Young posited that distributional justice primarily concentrates on physical possessions like food to eat or vehicles for transportation. As she explained, people who work towards distributional justice aim to provide "basic material goods" as quickly as possible to people suffering from severe deprivation. Such a task "obviously entails considerations of distribution and redistribution" (Young 19). In *Conceptualizing social justice in education,* Sharon Gewirtz explained simply that distributional justice "refers to the principles by which goods are distributed in society" (Gewirtz 470).

Quoting one of the very first authors on social justice theory, John Rawls in his 1972 article *A Theory of Justice*, Gewirtz explains that the distributional dimension of justice has historically been seen as synonymous with the term "social justice." "'The subject matter of justice is the basic structure of society, or more exactly, the way in which the major social institutions... distribute fundamental rights and duties and determine the distribution of advantages from social co-operation.'" (Gewirtz 470). Both Gewirtz and Young contend that by revisiting Rawls' understanding of justice, his theory is broader than an equitable division of resources.

This is the reason why both authors divide social justice work into two categories, distributional justice and relational justice. This second framework relates to

fairly providing opportunities and often requires the restructuring of unjust relationships. Gewirtz discusses the differences between distributional and relational justice by highlighting that relational justice focuses on "the *nature* and *ordering* of social relations, the formal and informal rules which govern how members of society treat each other both on a macro level and at a micro interpersonal level" (Gewirtz 471). Iris Young elaborates on this dimension by arguing for "democratic decision-making procedures as an element and condition of social justice" (Young 23). Undemocratic voting procedures, discrimination against women in the workplace, ignoring the political interests of immigrants—each of these unjust processes is relationship-based, not asset-based. Young elaborates that relationships, when structured fairly, produce opportunities. While referencing James Nickel's theory that opportunity stems from overcoming both internal and external obstacles, Young writes, "Opportunity in this sense is a condition of enablement, which usually involves a configuration of social rules and social relations, as well as an individual's self-conception and skills" (Young 26).

Distributional justice focuses on parity in regards to physical assets and relational justice restructures relationships to equitably provide opportunities. A hybrid paradigm offered by planning that can be used to approach social justice work is spatial justice. In the introduction to their book *Justice and the American Metropolis*, Hayward and Swanstrom explain that spatial injustice is "generated over time by institutional structures, including structures that segregate metropolitan space by race and class" (Hayward, Swanstrom and Macedo 4). The authors explain that if urban planners are not proactively resisting segregation and discriminatory zoning, densely concentrated, unjust

power relations will naturally form. They refer to this as thick injustice (Hayward, Swanstrom and Macedo 4).

Spatial justice addresses both the physical arrangement of the built environment and the non-physical conditions that this arrangement generates. In this manner it promotes both systems that Young and Gewirtz contend are necessary to create social justice, distributional and relational justice. Because of this synthesis and the inherent emphasis on multi-dimensional parity, including the influence of shifting demographics over the course of time, spatial justice is the most applicable framework in regards to just architectural practice.

Exchanging Privilege for Empathic Empowerment

Besides theorizing various frameworks to advance social justice, sociologists have studied the importance of shifting power from privileged social groups to disempowered social groups through empathy. In an article featured in Heldke and O'Conner's *Oppression, privilege and resistance*, Patricia Collins explained that this process is counter-cultural, "Building empathy from the dominant side of privilege is difficult, simply because individuals from privileged backgrounds are not encouraged to do so" (Collins 541). Collins expressed her respect for colleagues that regularly evaluated their own privileges, making the case that there is no compelling reason for those with privilege to examine their position—they must freely chose to "root out the piece of the oppressor planted within them" (Collins 541). If social groups with

privilege, premier access to goods and opportunities, fail to examine themselves and extend these resources to marginalized groups, social justice cannot exist.

In a discussion on privileges relating to gender and race, McIntosh echoed Collins' views by identifying privilege as an "invisible package of unearned assets" (McIntosh 1). Privilege, he explained, is often wielded as an unintentional weapon that creates social hierarchies. In place of the damage done by unacknowledged societal freedoms, privileged individuals can collapse "–isms" by empathetically empowering those without privilege. This must be done with caution, however, to avoid unwarranted feelings of valor that could widen the gap between groups with and without social advantages.

Sherene Razack offered a cautionary warning about this gap in *Stealing the pain of others*, a plea to her action-oriented colleagues to critically examine why they are advancing social justice. Razack argued that empathy is a "double-edged sword" (Razack 377), clarifying this metaphor to mean that uninvolved observers can unintentionally steal the pain of others in order to feel heroic as they express their compassion. In reference to genocide in Rwanda, Razack explained that some self-professed, compassionate activists were "engaged in a peculiar process of consumption, one that is antithesis to genuine outrage." This absorption merely resulted in dehumanizing the Rwandans in order to reinstate the outsider as "morally superior in relation to them" (Razack 375).

To navigate the fine line between the trap of "feel-good" social justice work and empathy manifested in authentic empowerment, it is important to review the most

relevant research on the process of disempowerment. Though there is a large body of literature on the role of power in regards to justice, international-development expert John Gaventa offers an analysis of disempowerment in *Power and Participation* that especially applies to urban planners and socially-minded architects (see figure 10). Gaventa summarizes three dimensions of powerlessness by explaining the relationship between the empowered and the disempowered players.

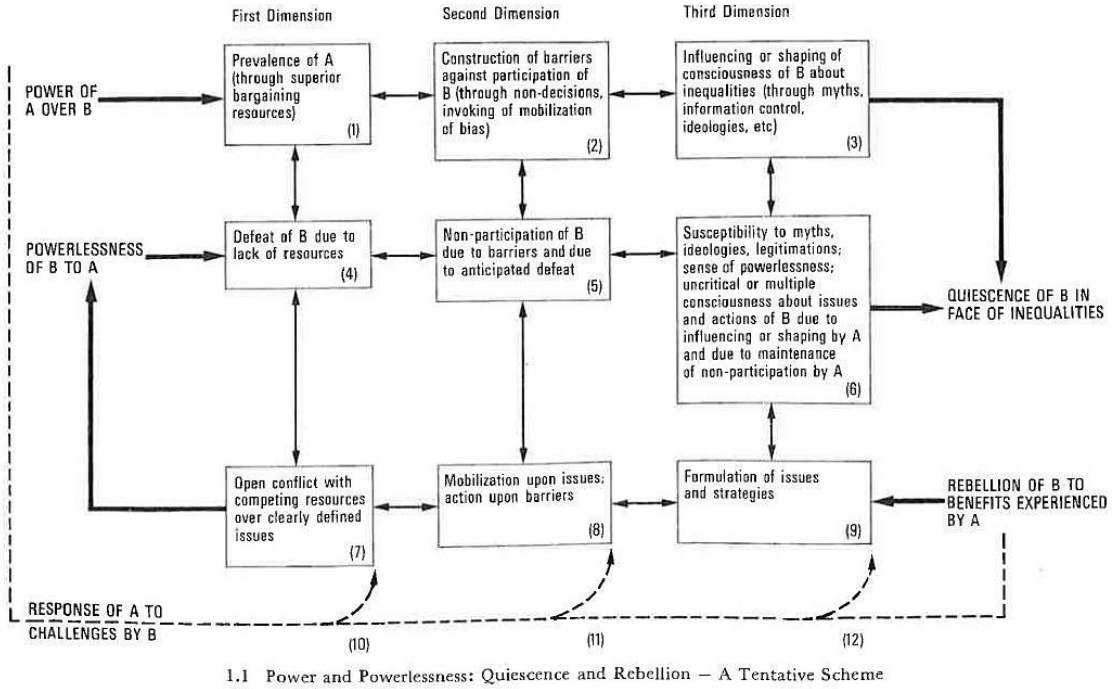


Figure 10. Three-Dimensional Theory of Disempowerment from John Gaventa; *Power and Powerlessness: Quiescence and Rebellion in an Appalachian Valley.* (Urbana and Chicago: University of Illinois Press, 1980.)

Within the first dimension, the party with power reserves control of resources over the disempowered party, often leading to uprisings like the Boston Tea Party during the American Revolution. The second dimension broadens this degree of control so that the party in power excludes the disempowered from participating in decisions. This dimension is summarized well by Young: "Decision-making issues include not only questions of who by virtue of their positions have the effective freedom or authority to make what sorts of decisions, but also the rules and procedures according to which decisions are made" (Young 22). The third dimension is the most dangerous to the long-term health of a community because the disempowered are psychologically manipulated non-participants. As Gaventa expounds on this dimension, "…[the powerless] are highly dependent. They are prevented from either self-determined action or reflection upon their actions" (Gaventa 18).

By critically examining their own privilege, acting on behalf of under-privileged social groups for unselfish reasons and reversing each form of disempowerment in Gaventa's model, social activists can become empathetic advocates for marginalized social groups.

Exchanging Equality for Equity

The literature on social justice includes yet one more topic worthy of examination for socially-driven architects. The justice-oriented goals of "equality" and "equity," though often used interchangeably in common discourse, are distinguished by social scientists as distinct ideas. In a special publication of *Equity & Excellence in*

Education published in 2010, Patton, Shahjahan and Osei-Kofi explain the meaning of equality versus equity, elaborating on the reasons why equity has a greater capacity to facilitate justice—

> 'Equality refers to the equal distribution of goods and services to different groups. However, this ignores the systemic and historical forms of exclusion that operate within society. Equity shifts the debate 'from equal treatment to that of access and removal of barriers for historically disadvantaged groups' (Ng, 2003, p.19). Unlike equality, equity is not about providing equal resources to different groups in exactly the same way. Instead, it is about providing the right amount of resources that a certain group needs to live a full life, given the historical, material, and social marginalization they have experienced (Zine, 2001). (Patton, Shahjahan and Osei-Kofi 270)

The authors extend this argument by explaining the metaphor of a group of barefoot children in need of shoes. To treat the children equally would be to give each of them two shoes. Though this seems fair to the average person, treating the children equitably would include giving them a shoe for each foot, ensuring that both shoes fit the specific child who receives them (Patton, Shahjahan and Osei-Kofi 270). Equitable treatment, therefore, focuses on real needs over equal treatment, yet its actualization still possesses a degree of cultural relativity.

In *Planning as if People Matter: Governing for Social Equity*, Sanchez and Brenman contend that "equity is an inherently vague and controversial notion. […]

Language changes over time and place" (Sanchez and Brenman 12). While the description of fitted shoes may appear equitable according to American cultural standards, it may have little relevance in a rural community in India. "Within an equity framework, we need to live with the complexity that there are no agreed upon standards by which we can judge what an individual or group deserves" (Patton, Shahjahan and Osei-Kofi 270). Social justice is not a fixed ideology that transcends context, social groups or systems of oppression. Social justice exists when cultural values are weighed and equitable treatment is given preference over equality. Sanchez and Brenman conclude that equality is, in fact, unsustainable, but equity facilitates a more sustainable use of resources (Sanchez and Brenman 8).

This is why the two authors discuss "social equity interventions" within their book. "A social equity intervention is a planned and resourced action to correct a social wrong and improve the situation of a traditionally discriminated-against group" (Sanchez and Brenman 136). Sanchez and Brenman go on to explain that a successful intervention intentionally alters behaviors, reduces vulnerability and/or improves specific outcomes. Interventions can exist at varying scales, ranging from specifically increasing tobacco taxes to raising sanitation standards across industries. The authors contend that educating a targeted audience can be an important means to intervene, "especially if the education is in fields not formally covered, and more hands-on than a traditional classroom, lecture-based, public education" (Sanchez and Brenman 140). At the feet of social scientists, socially-conscious designers can learn how to promote

distributional, relational and spatial justice, empower their clients through empathy and promote equity through culturally-relevant interventions.

CHAPTER 3: METHODOLOGY

As demonstrated through the literature review, architecture has traditionally engaged people outside of the profession as clients; instigators and funders that create buildings and public space. In the past twenty-five years, architects have increasingly seen their work as a "social construction," emerging from collective creativity and collaboration with the end-users of their designs, not only their clients (Cuff 4).

Research into this movement was prioritized alongside research of social justice, which was theorized by sociologists working to advance racial equality, women's rights, equitable access to education, etc. Early examination of the literature revealed overlapping concepts in these fields. An action-based research project emerged in an attempt to synthesize these concepts and determine whether social architecture was, as the name suggested, a genuine hybrid of architectural practice and the realization of social justice.

Research Questions and Hypotheses

Investigation began with the research question: How can architectural practice expand to advance social justice? Based on the preliminary exploration of the goals of socially-conscious architects and the social justice movement, the original hypothesis to this question was that architects can create equitable shelter. The term "equitable shelter" was first derived from observing the coinciding goals of organizations focused on

producing justice via spatial design. Many architects today are advancing social justice through both creations and processes, whether designing from recycled materials or offering design services free of charge. Organizations more closely associated with issues like affordable housing, homelessness and zoning policies focus on spatial parity by providing shelter to people in need and advocating on their behalf to government agencies. Equitable shelter was perceived to be the primary target of both approaches.

Background research revealed that the pairing of these words was formerly used in a University of Delaware study researching disaster-relief housing. The phrase was used in the context of emphasizing that emergency workers take responsibility for providing "equitable shelter options for all" (University of Delaware 1). The study concluded how equitable shelter could be attained, by preventing overlapping intervention efforts, maximizing available resources and integrating the latest scientific technology, but not what it actually was.

Though this phrase appeared to encapsulate both a goal of social justice, to create equity, and a purpose of building design, to shelter inhabitants, the exact meaning and social impact of equitable shelter remained vague. The question that thus emerged and instigated a social experiment, "What is equitable shelter?"

The initial conception of equitable shelter was that it was an essential component of a socially just society—a product of a series of just systems including architectural design. The initial meaning, as defined by the primary investigator and author of this paper in December 2012, was as follows:

Equitable shelter refers to safe, weather-resistant spaces
that meet the specific needs of inhabitants.

This definition emphasized safety and protection from the elements because these are two commonly identified purposes in building design. The section relating to needs stemmed from sociological research that explained equity in terms of fairly distributing goods and opportunities on the basis of need rather than equal treatment.

Precedent Research

The views within the social architecture movement have not yet revolutionized the architectural profession as a whole, but they have informed a number of designers and created thousands of projects. Three endeavors that fall in line with this movement were reviewed prior to designing this experiment, each demonstrating the potential of a participatory exhibition to generate social impact.

As covered in detail within the literature review, these exhibitions were *Design in Action, New Architectures of Social Engagement* and the interactive workshops of the *Reflection Art Gallery* hosted in Washington D.C., New York City, and New Delhi, respectively. Each exhibit demonstrated the potential impact of design to create positive changes within communities. The exhibitions were reviewed online through websites that featured photographs and descriptions of the work displayed, including news sources and webpages tied specifically to long-standing art exhibitors. These examples

influenced the course of the project because they demonstrated how both interactive displays and pictorial story-telling could help generate understanding. They also demonstrated the capacity of graphical narratives to communicate to a creative audience.

Research Goals

The preliminary examination of the literature, including the study of designers that viewed their crafts as definitively social, inspired the following goals for this research:

1. Instigate a collective investigation of the meaning and social impact of equitable shelter.
    a. Collect and analyze data from both designers and the general public, hereafter referred to as design-users, on the meaning and social impact of equitable shelter.
    b. Use that data to evaluate whether or not architects are already creating equitable shelter.

2. Employ methods espoused within the social architecture movement in the experiment.
    a. Primary methods:

i. Inclusive practice: adopt an economically and geographically unbiased approach.
ii. Participatory practice: involve the end-users in the design process and realization of design products.
iii. Proactive practice: disregard traditional architectural outputs (building design) and financial/reputational incentives.

b. Analyze the processes used through the experiment to evaluate if these methods create equitable shelter and advance social justice.

Experiment Design

The experiment selected was an action-based, participatory exhibition that surveyed both designers and design-users on the meaning and social impact of equitable shelter. The experiment and research results were influenced by five main participants groups, the selected location in space and time and the assorted materials of partnerships, communication platforms and the physical components of the exhibition enclosure.

Action-based Approach

The importance of an action-based research approach has been heavily emphasized in the field of community and regional planning. In *Planning as if People Matter: Governing for Social Equity*, Sanchez and Brenman highlighted the importance of real world, social equity interventions to correct social wrongs. “While aiming for

social justice is aspirational, it is not possible to do justice in the abstract—real people are affected" (Sanchez and Brenman 3). The authors defined a social equity intervention as a planned and resourced action that intentionally improves societal outcomes.

The aforementioned planner from the University of Wisconsin, Randy Stoecker, has also published on real world research processes and drawn conclusions that align with Sanchez and Brenman's idea of a social equity intervention. Stoecker emphasized that the research of any problem involving multiple stakeholders should be active and participatory so that the solutions are relevant. In addition to this foundation, designing an action-based investigation like an exhibition fell right in line with social architecture methods of inclusive, participatory and proactive practice.

Data Collection Methods

In order to instigate a collective investigation of the meaning and social impact of equitable shelter, as established in the goals of the project, two surveys were designed to gather data from both designers and design-users. By targeting these specific audiences, the surveys offered insight into multiple frameworks of thinking about architecture. Using two surveys as compared to one also increased the likelihood of better understanding equitable shelter because the results could be compared to each other and checked for similarities.

The surveys were integrated into the artist registration and the design of the exhibition itself. The plan for extracting data from each survey is detailed below (see table 1).

	Designers	Design-users
Collect information	Utilize online form to measure designers' understanding of the term "equitable shelter" by answering the question, "How do you define equitable shelter?"	Request that design-users visiting the exhibition record written responses to what they observed by finishing the sentence "Equitable shelter is…"
Analyze	Analyze word frequency to aid in defining the meaning/social impact of the term equitable shelter	Analyze word frequency to aid in defining the meaning/social impact of the term equitable shelter

Table 1. Survey Design Regarding Equitable Shelter

Location in Space and Time

The exhibition was hosted on the Iowa State University (ISU) campus for three days during an annual campus festival in April 2013. The ISU campus was an ideal environment for this exhibition because the exhibition coordinator had access to various spaces as a student, the University covered many of the project expenses and college students who had not yet been exposed to the problems associated with a lack of equitable shelter were able to participate in the exhibition.

Integrating Participants

Designers were selected as the primary target audience for this investigation because they were and are the creative place-makers that could inevitably ascribe meaning and social impact to the concept being tested: equitable shelter. Additionally, they are also design-users; they represent a subset of the overall population that enjoys design. As Dana Cuff attested through her research, "a professional community such as architecture is a cultural microcosm" (Cuff 157).

Besides designers, various subsets of design-users were engaged in this project to complement the data collected from the designers. The participation of design-users would facilitate an outside evaluation of the meaning and social impact of equitable shelter. The social architecture movement also heavily emphasizes involving the end-users of design. For these reasons, design-users were recruited as project volunteers, financial partners and exhibition guests.

Materials

Three key materials were stirred into the mixture of this experiment to test the meaning of equitable shelter: partnerships, communication platforms and the physical components of the exhibition enclosure. These represent both physical and non-physical elements that altered the course of the project, influencing both the processes involved and the knowledge produced.

Lessons Learned

A retrospective evaluation of the exhibition revealed components that helped achieve the goals of the project as well as components that hindered its success. Among the strengths were the location and primary participant group selection, while the weakest elements included the limited number of leaders invested in the project, lack of research preceding the survey design and systems that inadvertently discouraged participation.

This project's most successful components included the on-campus, outdoor site and the emphasis on educating college-aged designers. Though the exhibition location was not secured until a couple of weeks before the exhibition began, which will be discussed in more detail in subsequent chapters, working within the Iowa State processes for space reservation kept the project grounded in reality. People who lack equitable shelter are often limited by legislation or corruption that impedes legal acquisition of land, housing or even a bench to sleep on. Reserving a space on campus for the exhibition increased the exhibition coordinator's empathy for those that must jump through legal hoops to procure shelter. It also deepened respect towards these individuals in regards to the way that they design. Foul weather was a threat of securing an outdoor location for the exhibition, yet this threat is a constraint that affects people every day who are building shelters from free or donated materials. These methods require an enormous amount of creativity in order to successfully repurpose objects to protect against the elements while meeting basic needs. For these reasons, the location fostered

understanding of the real world limitations of inequitable shelter.

Including college students from the Iowa State College of Design was another strength of the exhibition. Hundreds of students learned about the project via participant recruitment efforts. During conversations and presentations, students were asked to consider the meaning of the phrase “equitable shelter” concurrent with making a decision about whether or not to participate. Those that chose to donate artwork were arguably the most invested in the success of the project because they not only donated time and talent, but the creations of their labor as well. Most of these young participants attended the exhibition and brought friends or family members, which facilitated an opportunity for the students to share their passion with people who were likely unfamiliar with the social implications of design. This level of investment from the artists was perhaps most evident when a student withdrew her piece from the exhibition because she desired to continue working on it and share it with her family. Besides the donating artists, other students in the College of Design were involved as volunteers and exhibition guests. Their involvement led to intriguing dialogues about the potential of design to make a social impact and how the exhibition successfully demonstrated this possibility.

If this research process were to be repeated, more leaders would be involved in the exhibition coordination, more research would have preceded the design of the survey and the systems for registration would have been streamlined to maximize participation. Because this exhibition was instigated as a part of a thesis project, the exhibition coordinator and author of this paper bore the primary responsibility of managing

participants, logistics and the design of the enclosure. The project was too large for one person to manage successfully, so two volunteers were gradually incorporated to help manage participant groups, update the website and collect a list of potential financial partners. If an exhibition like this were to be repeated, a team would be set up in advance and each of these tasks would be delegated from the beginning. An exhibition coordinator could lead the team, a webmaster could create the website and one liaison could manage each participant group: artists, volunteers, exhibition guests, non-profit partners and financial partners. Together, a team of at least seven people could include more participants, advertise to a broader audience and collect more survey responses to influence the conclusions of the research. If expanded beyond a leadership team, this type of project could be organized by a full class of collegiate design students. Those who do not take one of the leadership roles could then be featured as the artists in the exhibition.

Because of the vast number of responsibilities that fell to the exhibition coordinator in this project, limited time was spent researching survey design and analysis. The survey design was primarily shaped by IRB policies, conversations with professors and the primary investigator's past experiences with surveys, rather than a thorough review of tested methods. If this research process were repeated, these methods would be studied at greater length before the survey was designed and after the results were collected to ensure that responses were collected and interpreted most effectively.

The final elements that would be organized differently are the systems of participant registration for the artists, volunteers and financial partners. The online form

that the artists filled out to register for the exhibition asked nineteen questions, including three open-ended questions and details about what type of artwork would be donated. The form took at least ten minutes to fill out and it is possible that many people were dissuaded from signing up because they did not expect it to take so long when they first clicked on the link to sign up. It is also possible that the level of information requested regarding the items that artists intended to donate was too detailed. Many artists could not register until weeks after learning about the exhibition because they needed to brainstorm about what they would create or donate. More artists may have participated if they initially submitted a short on-line form that included their name and contact information and then later filled out more information about the work that they planned to donate.

The volunteer registration process also could have been streamlined by using only one digital platform instead of two. Before an online account with VolunteerSpot.com was established and a Volunteer Manager offered to manage this system, a Google Document was used to recruit volunteers. These dual platforms made it difficult for potential volunteers to understand how many time slots still needed to be filled, therefore limiting participation. The recruitment of financial partners was also limited by time because it took four months to establish a system to accept donations. These registration processes for artists, volunteers and financial partners likely hindered involvement and could be designed differently in the future to maximize participation.

CHAPTER 4: EQUITABLE SHELTER ADVANCES SOCIAL JUSTICE

The hypothesized term "equitable shelter" was tested within the interactive exhibition in an attempt to discover its meaning and social impact. Two surveys were conducted that engaged the audiences of designers and design-users, yielding results that highlighted the importance of five key descriptors: safe, non-physical, satisfying basic needs, weather-protected and home. By marrying this data with the lessons learned throughout the process of designing the exhibition, a final definition was derived and compared with the literature on social justice. This analysis led to the conclusion that equitable shelter can be both a product and a system that advances social justice.

Survey Analysis

Background

The original definition of equitable shelter as defined by the primary investigator and exhibition coordinator in December 2012 was "safe, weather-resistant spaces that meet the specific needs of inhabitants." This definition evolved during the process of the experiment as the result of a presentation involving an Ames architect named Sam Stagg on the importance of design in creating spaces that meet needs. Regardless of whether or not an architect was involved, Stagg emphasized that humans intuitively craft the spaces where they find themselves to better suit their needs (Stagg). This conversation led to a

new understanding of equitable shelter that translated into an interim definition decided upon in March 2013:

> *Equitable shelter* refers to safe, weather-resistant spaces designed to meet the specific needs of inhabitants.

It was this meaning that was the publicized during the exhibition via a storyboard about the project (see Appendix B, Inspiration). This interim definition is also the one that was compared against the survey results and supplemental research in order to propose a final definition.

Before examining the survey results, it is important to note the differences in how each survey was administered that likely influenced the responses collected. The key differences were former exposure to the term equitable shelter, privacy and available space. For example, the designers that were surveyed had not been exposed to any sort of definition of equitable shelter, just the term itself in the prompt that explained the exhibition focus (see figure 11). The artists also could not view each other's responses and submitted them in February, long before the exhibition was constructed. These responses were additionally submitted via an online form that did not specify a length for their answer.

Alternatively, most design-users involved in the survey had walked through the exhibition and read the interim definition of equitable shelter proposed on the storyboard (see Appendix B, Inspiration). They wrote their responses on pieces of red duct tape with permanent marker, which were then applied to the walls of the exhibition enclosure.

Because of the public nature of this survey, many design-users read other responses before contemplating their own. The physical length of the tape additionally influenced the length of the responses (see figure 12). The degree of privacy and space for a lengthy answer partially explained why the responses of the designers were generally more verbose. The fact that most designers had not formerly been exposed to a definition of the word-pairing, however, suggested that the context surrounding the phrase within the website prompt helped ascribe meaning and social impact to the term.

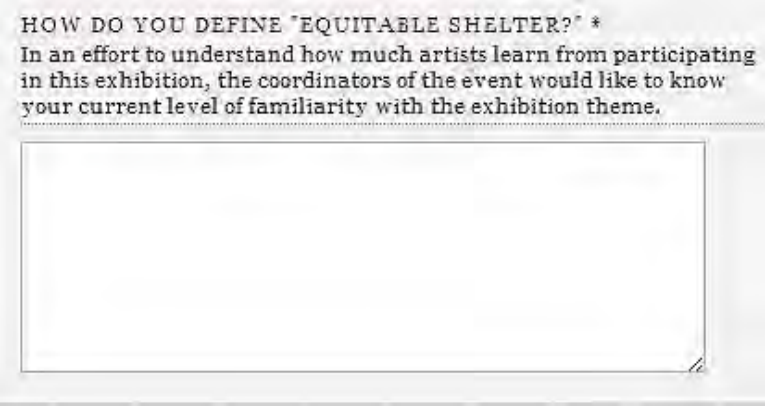


Figure 11. Online Survey Prompt for Designers

Figure 12. Interactive Survey for Design-Users

Another key difference in methods was the incentive for participating in the surveys. The designers voluntarily answered the prompt regarding equitable shelter as a component of their registration process to donate artwork. Though two artists submitted artwork for the exhibition without answering the research question, this method resulted in a 92% response rate. The volunteers, financial partners and exhibition guests also offered their answers voluntarily, as mandated by Institutional Review Board (IRB) (see Appendix C, IRB Certification, Approval and Informed Consent Forms), but it is likely that less than one in five guests answered the survey question because they had no incentive for responding.

Besides the differences in methods, it is important to observe the differing levels of investment and priorities of the participants that were surveyed. Participating designers were more passionate about the issue of equitable shelter than people that visited the exhibition, as demonstrated by their commitment to donate artwork to the project. Many mentioned in their biographies that they had experience working with the homeless or had previous design experience in developing countries. For example, an artist that donated a series of photographs featuring homeless men in Chicago had an internship there that enabled her to live out her vision as a designer, which she expressed in the bibliography that she submitted to be featured on the project website: “Design should always be striving to help people in the purest way possible […] if [designers] took the time to care more about our fellow brothers and sisters instead of our paychecks, we would be [living] up to our potential.” The design-users that were

engaged in the exhibition were less invested in the project and likely had less exposure to the problems caused by the lack of equitable shelter.

Survey Results

	Designers (24 participants)		Design-Users (38 participants)		Total (62 participants)	
Safe	9	38%	12	32%	21	34%
Non-Physical Elements	11	46%	8	21%	19	31%
Satisfying Basic Needs	11	46%	8	21%	19	31%
Weather-protected	11	46%	5	13%	16	26%
Home	6	25%	7	18%	13	21%

Table 2. Most Frequently Used Terms within Survey Responses

A total of sixty-two survey responses were analyzed based on word frequency (see Appendix A). Because this data was qualitative, words with similar meanings were synthesized into the same category. The five categories that were used the most among both designers and design-users were safe, non-physical elements, satisfying basic needs, weather-protected and home (see table 2). A summary of each of these terms is explained below and contrasted with the definition of equitable shelter publicized at the exhibition.

Safe

Nearly one third of the design-users identified safety as a priority in the creation of equitable shelter, though an estimated fifteen per cent or less of these respondents

were architects. Safety was likely expressed as a primary concern because design-users have limited skills in regards to adjusting spaces to be safer, they simply inhabit. For example, if a neighborhood is not safe, design-users will try to not live there. Change at the scale of the neighborhood is typically beyond their influence as ordinary citizens. Design-users are also unlikely candidates for major home improvements. Consumers today rely heavily on architects, engineers, developers and government leaders to provide safe places to live.

Designers also emphasized that safety is an integral part of equitable shelter because they are both inhabitants and habitat-makers. Nearly two out of every five designers emphasized safety in their definition, representing an even larger portion of the group surveyed than the design-users. The artists who participated clearly recognized their responsibility in this area. The proposed interim definition of equitable shelter had identified something that clearly mattered to both designers and design-users: equitable shelter ensured the safety of inhabitants.

Non-physical Elements

Almost one out of every three survey respondents identified something intangible as a relevant component to equitable shelter. The design-users especially emphasized things including justice, love, hope and pride. A space was not equitable, many explained, unless if it facilitated and inspired the expression of these things. Designers also mentioned non-physical components like justice, hope and love, but included an even wider array of elements: self-actualization, feelings of success, equality, non-oppressiveness, promoting human dignity and “a space someone can call their own.”

This non-physical component that facilitated self-actualization and self-expression was not represented in the interim definition of equitable shelter, therefore offering the most potential to transform the meaning and social impact of the term.

Satisfying Basic Needs

The same overall number of respondents who identified non-physical components as relevant to equitable shelter also emphasized the importance of satisfying of basic needs. This category was a synthesis of multiple words and phrases that referenced human needs for survival and cultural appropriateness. Two of the design-users and two designers mentioned potable water. Electricity, food, sewage systems and natural light were also highlighted by one designer. A non-designer explained equitable shelter to mean "a gateway to education, improved health and safety, community connectedness, and financial security." Yet another used similar language by calling it "the foundation for success in so many other areas: health, education, employment, happiness." Though these ideas relate to the non-physical components just discussed, the respondents related these things to basic needs. The word "need" was actually mentioned by thirteen of the nineteen people whose responses fell within this category.

The interim definition had expressed the importance of meeting needs through defining equitable shelter because sociologists' who define equity like Patton, Shahjahan and Osei-Kofi emphasized giving a "shoe that fits" to each foot without a shoe (Patton, Shahjahan and Osei-Kofi 270). Meeting basic needs, in popular opinion, was indeed an essential component to equitable shelter.

Weather-protected

Protecting inhabitants from inclement weather was a higher priority for designers than design-users, as demonstrated by comparing the statistics. Almost half of the designers mentioned "protection from the elements," the cold, heat, humidity or the forces of nature. Though two design-users mentioned warmth and three directly referred to the weather, this only represented thirteen per cent of the design-users. These numbers suggest that people who enjoy design are more likely to take the roof over their head for granted than the designers who work tirelessly to keep citizens protected from extreme weather.

Though the phrase "weather-resistant" was a component of the interim definition of equitable shelter, reviewing these results and considering the term "protection" in conjunction with "the elements" was deemed more appropriate. "Protection from the elements" implied that equitable shelter could be both indoors and out, not just inside resisting the weather.

Home

The fifth most frequently-used term from the survey was the term "home." Two responses from the design-users compared the term to "house," identifying the two as separate entities. One designer also expressed the difference. "[…] There is a very big difference from a house and a home too. The comfort of your home and family is the most important aspect of a healthy lifestyle." Both designers and design-users often used the term with adjectives including some of the non-physical elements described above.

The ideas of constancy and permanence also were integrated into some of these responses.

It is clear from these results that both designers and design-users view home as more than a building with four walls and a roof. The concept of home has many non-physical attributes that have been studied by sociologists and urban planners. In light of the survey results, a cursory review of literature on this topic revealed that a home is ”a place where a person is able to define the space as their own, where they are able to control its form and shape” (Tipple and Speak 338). The authors that coined this definition elaborated on the importance of self-direction by explaining that a home is where one can choose to entertain guests or retreat from society. This intangible idea of a self-governed sanctuary was not integrated into the proposed definition of equitable shelter, but it too offered great potential to alter the meaning and social impact of the phrase.

The Meaning and Social Impact of Equitable Shelter

Definitive Meaning

The results from the investigation of the term “equitable shelter” yielded insightful priorities for both designers and design-users. Equitable shelter was safe, satisfactory, protected from elements and encompassed more than physical elements. Though it was originally perceived to be a physical product of design, the resulting meaning encapsulates both a product and system that advance social justice.

Equitable shelter is an environment that ensures the safety of inhabitants and protection from the elements, acting as a gateway to the satisfaction of basic needs, self-actualization, self-expression and self-direction.

Product and System of Social Justice

A building is both a product of architectural practice and a system of components working together. The windows, doors, heating and cooling equipment, plumbing and other components facilitate day-to-day use of a structure. In the same way, equitable shelter is both a product and system. Designers can create physical buildings that fulfill the definition of equitable shelter and cities can collectively create systems of equitable shelter.

In light of the literature, social justice can also be defined as both a product and a system. As Iris Young emphasized, social justice concerns the degree to which a society facilitates self-actualization, self-expression and self-direction (Young 37). It is a series of systems that filter reality into unjust or just categories. Racial equality, gender equality, access to education, democracy, equal representation and religious freedom are just a few of the many overlapping strings that weave the web of justice. Yet each of these systems is also a product. Racial equality is a product of legislation and advocacy. Democracy is often a product of war. Social justice is the product that is filtered through all of these systems to create collective self-fulfillment.

Equitable shelter is one additional layer in this web, a system and product that advances justice in regards to the built environment (see figure 13). By emphasizing safety and protection from the elements and acting as a gateway to basic needs and self-fulfillment, equitable shelter impacts society by advancing social justice.

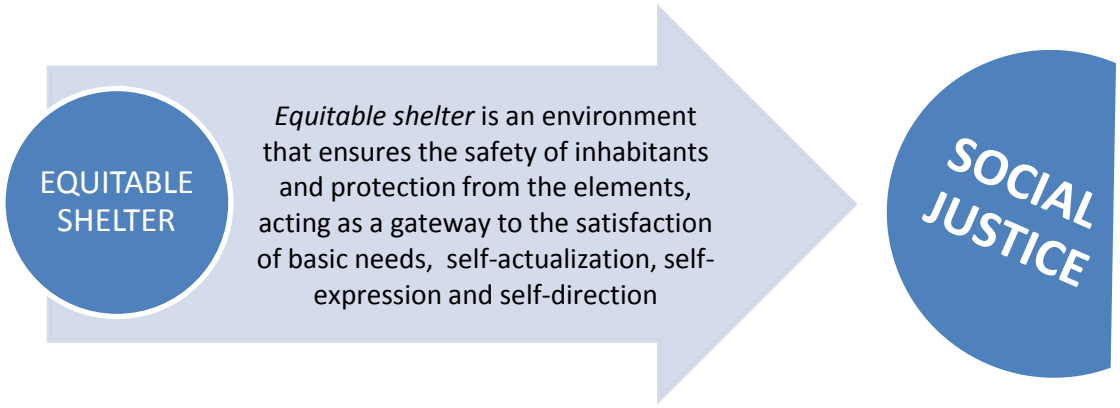


Figure 13. Equitable Shelter Advances Social Justice

CHAPTER 5: SOCIAL ARCHITECTURE CREATES EQUITABLE SHELTER

The designers today that are most concerned with equitable shelter originate from within the social architecture movement. Though social architecture and social justice are impossible to completely filter into distinct categories, evaluating each mode of architectural practice reveals a distinct relationship to a social justice framework (see table 3). The FO(u)R WALLS exhibition demonstrates each relationship. These observations lead to the conclusion that social architecture is generating equitable shelter and therefore advancing social justice.

Traditional Practice	**Social Architecture**	**Related Social Justice Framework**
Focuses on clients who can afford services	*Inclusive Practice* is economically and geographically unbiased	*Spatial Justice* ensures unbiased distribution of goods and services throughout a spatial environment
Connects designers with funders of design work	*Participatory Practice* engages end-users in design process and realization of design products	*Empathetic Empowerment* examines how privilege and power relationships influence interactions while working alongside partners
Reactive to clients with money, power and/or proposed solutions	*Proactive Practice* seeks out problems to solve regardless of financial gains and reputational incentives	*Equity* filters solutions to problems through the cultural context and relevant needs rather than creating equality

Table 3. Overview of How Practices within Social Architecture Differ from Traditional Practice and Correlate with Social Justice Frameworks

Inclusive Practice Leads to Equitable Shelter

Inclusive Practice Generates Spatial Justice

As explained in the literature review, architects engaged in inclusive practice are nondiscriminatory in their design work, working with clients regardless of geographic locale or economic profile. In a similar manner as inclusive practice, authentic spatial justice requires an emphasis on both local and global contexts. As demonstrated by many practicing architects and the FO(u)R WALLS exhibition, this approach to design leads to spatial justice, creates equitable shelter and inevitably advances social justice.

Examples in Social Architecture

Spatial justice requires the distribution of the physical element of space to be nonbiased, creating equitable access to both physical assets and relationally-generated opportunities. Though this condition was conceived by Hayward, Swanstrom and Macedo at the scale of a city, social architecture has applied this theory even beyond the metropolis. The aforementioned architect Sergio Palleroni demonstrates attention to spatial justice by proactively engaging in projects around the world through his work with students. Bryan Bell's efforts with Design Corps are equally relevant, realloting space throughout the United States. Designers like Palleroni and Bell recognize that disparities at local, national and global levels marginalize citizens into undesirious spatial crevices. The work of these socially-conscious architects is spatially reorganizing local enviornments to facilitate opportunities for people at both the global and local

scales, regardless of economic status. By offering their services to more than the 2% of the global population that have historically employed architects (Bell, “Pre- and Post-Form” 77), the social architecture movement is generating spatial justice.

Examples in FO(u)R WALLS

The exhibition organized as a component of this research demonstrated the ability of inclusive pratice to generate spatial justice by involving partners that work in separate environments and locating the exhibition in a public location within Ames.

Including Partners

Partnerships with non-profit organizations were the first materials integrated into the experiment in an effort to exercise inclusive practice. Action-based research advocates like Sanchez, Brenman and Stoecker emphasize conducting research in the lab of the real-world. Socially-conscious designers like Teddy Cruz abide by this philosophy by working closely with communities and the non-profit organizations that represent them. Activists do not often write about how they operate, they simply operate on what they believe. Involving partners offered opportunities to learn from them and include participants in the exhibition that benefited from their efforts. Both the partners and those who benefited from their efforts were likely to be eager participants in the research because they already cared about the social impact of equitable shelter, regardless of whether or not they referred to it by that title.

To best employ inclusive practice, two partners were included in the project based on their location, potential for a working relationship and mission. One partner worked in the local environment of Ames and the other in an environment on the opposite side of the world in New Delhi, India. By including partners from differing locales, the exhibition experimented with inclusive methods via a "glocal" focus. This term is used in social justice work and refers to thinking global while acting local. Glocal problem solving consists of a dual-focus on issues that affect global and local communities (see figure 14). Inclusive practice is glocal because designers work with select local populations while being mindful of the global issues that influence the people whom they serve.

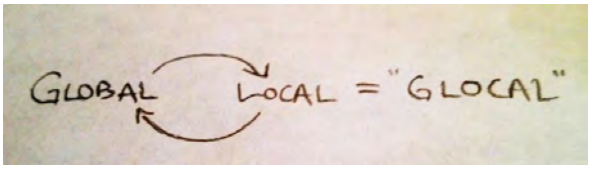


Figure 14. Glocal Diagram

The partners selected were both non-profits organizations: the Emergency Residence Project (ERP) of Ames, IA and Engineering Ministries International India (EMI2) from New Delhi, India. The organization in Ames had potential for a strong working relationship based on proximity, while the one in Delhi had potential based on an existing affiliation with the project coordinator. The missions of both organizations focus on providing social justice through spatial parity, though they serve different end-users. The ERP, founded in 1985 by a former social worker and long-time Ames

resident, Vic Moss, primarily advances justice by sheltering the homeless and proactively preventing homelessness. EMI2 was founded in 1998 and is now one of seven offices in a global organization that donates architectural and engineering design services to clients in impoverished communities. Representatives from both organizations were invited to collaborate in the early stages of this project and agreed to help recruit designers to participate as artists.

Including each partner influenced the final outcome of the experiment. Dannah Koeniger, a licensed civil engineer and the Intern Coordinator at EMI2, was the first to challenge the vagueness of the original theme of the exhibition: poverty in the built environment (see Appendix C, Notes from Discussion with Dannah Koeniger). This led to the initial conception of the term "equitable shelter," which was predicted to be more relatable to design-users. Dannah also suggested researching the Creative Conscience workshops held at the Reflections Art Gallery in Delhi, which helped inspire an art workshop hosted at the ERP on March 9, 2013.

Figure 15. Including Children from Homeless Families at the ERP

Figure 16. Exhibition Guests amidst Artwork from the ERP Children

This workshop involved approximately fifteen children of residents that were staying in the ERP facilities. Orchestrated by the Executive Director of the organization, the children were given paper, pencils and markers and asked to draw images that reminded them of "home" (see figure 15). The children that participated were between the ages of three and twelve. Their work was featured in the exhibition in an effort to bring their families to the display and make an impression about the local relevancy of homelessness (see figure 16).

Unfortunately none of the children or their families actually attended the exhibition, either because they could not afford transportation, they simply were not interested or they had already left Ames, which is likely due to the fact that the exhibition was almost six weeks after the workshop and many families stay at the ERP for less than six weeks. Thankfully, the Executive Director Vic Moss attended and two members of the ERP Board of Directors volunteered to help supervise the artwork. This participation and the artwork produced within the workshop demonstrated how deep the relationship with the ERP had become since the exhibition coordinator initiated an affiliation with Vic in late November (see Appendix C, Notes from Discussion with Vic Moss). Including partners from differing locales that consisted of constituents from differing socioeconomic classes inevitably supported the claim that inclusive practice can advance spatial justice.

Including the Public

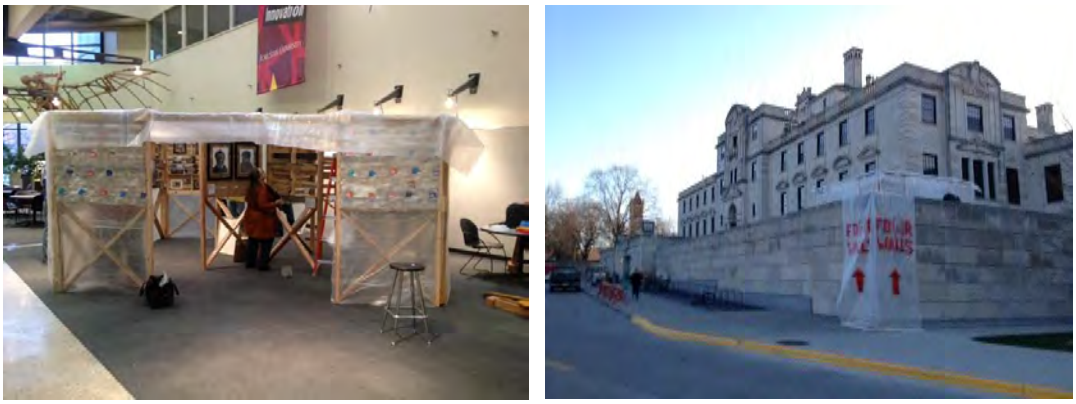
Locating the exhibition in space and time in a public environment also facilitated the inclusion of members of society from varying backgrounds. The exhibition was

hosted during the week of VEISHEA, an annual, weeklong festival that celebrates the achievements of the ISU community and offers a variety of educational and entertainment functions. The name was established in 1922 by incorporating the first letter of the colleges at that time: (V)eterinary Medicine, (E)ngineering, (I)ndustrial (S)cience, (H)ome (E)conomics and (A)griculture (Iowa State University). Students, alumni and community members attend the festival, especially the final Saturday of the event known as VEISHEA Village.

Locating the exhibition in a central place on campus during the festival also ensured that as many people as possible were included in the exploration of equitable shelter. The west terrace of the Memorial Union, a central hub on campus with a large dining area, was originally selected because it was highly visible to both the Ames community and ISU students. The site is within view at the intersection of Lincoln Way and Linn Boulevard, where there is a stoplight for motor vehicles and heavy pedestrian traffic. The place on the terrace where the exhibition was installed is also adjacent to the entrance to the cafeteria, where students flow in and out from 7:00 AM through 7:00 PM. This window of time determined the hours that the exhibition was open, though it was also selected to include community members that could only visit the display before or after work. The campus bookstore was also a popular attraction during the festival and was accessible via a door near the selected site.

The terrace was additionally selected for its potential to attract a diverse composition of exhibition guests, especially design-users who might not be naturally inclined to tour an exhibition. The other activities at VEISHEA were speckled

throughout central campus, along the street north of the terrace and inside the Memorial Union. Many people that did not know about the display in advance were expected to wander past the exhibition en route to another destination. An outdoor location was also given preference over an indoor one because of visibility. Because this public location was such a high priority, a new design challenge arose of creating a weather-tight enclosure in the outdoor environment. Though foul weather and the oversight of the ISU administration inevitably forced the exhibition to be indoors for two of the three days it was open, the back-up location still allowed a diverse, public group to be included in the exhibition (see figures 17 and 18).



Figures 17 and 18. Public Locations of FO(u)R WALLS, inside the Lightfoot Forum and outside on the terrace where a banner helped direct pedestrians

Spatial Justice Creates Equitable Shelter

Inclusive practices employed by social designers like Palleroni and Bell and those exercised within the FO(u)R WALLS exhibition demonstrate that inclusive practice creates spatial justice. Whether conducting developmental projects in a rural

village or converging non-profit partners with the public via an interactive exhibition, these endeavors help reorganize space to facilitate access to goods and opportunities.

When spatial justice is in place, equitable shelter is more attainable. A conscious spatial distribution of goods and opportunities helps to connect people to resources that satisfy their basic needs. For example, building a new grocery store in a food desert advances spatial justice and helps the houses in that neighborhood qualify as equitable shelter. Spatially just communities are also safe, protecting citizens from dangerous civilians and the elements. Lastly, spatial justice facilitates self-actualization, self-expression, and self-direction because it divides access to opportunities across neighborhood, city, state and national boundaries. Because inclusive practice produces spatial justice that in turn creates equitable shelter, inclusive practice creates equitable shelter and therefore advances social justice (see figure 19).

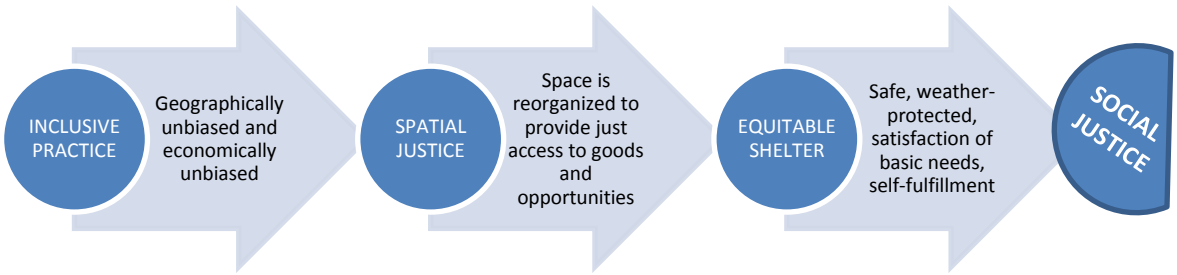


Figure 19. Inclusive Practice Leads to Equitable Shelter

Participatory Practice Leads to Equitable Shelter

Participatory Practice Generates Empathetic Empowerment

Participatory practice emphasizes engaging end-users in the design process in such a way that their contributions influence design products. The literature review identified that this form of practice overlaps with the theory in social justice of empathetic empowerment, which can be defined as the conscious examination of privilege and power relationships while complementing partners in the accomplishment of a task. Social architects like those involved with the Rural Studio are prime examples of using participation to empathetically empower communities. The exhibition's use of participatory methods also demonstrated the potential of participatory practice to generate empathetic empowerment, which ultimately creates equitable shelter and advances social justice.

Examples in Social Architecture

Empathetic empowerment entails an exchange of privilege, the "invisible package of unearned assets" (McIntosh 1), for relationships that facilitate self-government. Though Razack argued that empathy is a "double-edged sword" (Razack 377), successful social architects are holding the "knight-in-shining-armor" mentality in check by diving into problems at the grassroots level and allying with communities to generate solutions. Many architects in this movement exercise this mode of practice by organizing community workshops to generate solutions. Professors and students at the

Rural Studio go so far as fund-raising alongside the community members with whom they are designing (Rural Studio). Though these projects often serve low-income, uneducated families, designers do not impose their technical expertise. When compared with Gaventa's theories on disempowerment, it is clear that efforts such as these do not withhold resources, restrict decision-making power or manipulate design-users into agreement about design decisions. Social architecture is empathetically empowering the partners it serves through participatory practice.

Examples in FO(u)R WALLS

FO(u)R WALLS demonstrated participatory pratice by involving multiple participant groups in the design process, negotiating with the ISU Administration, establishing accessible communication platforms and using physical materials that generated understanding of the problems that the exhibition featured. These participatory methods further support the claim that engaging end-users in design generates empathetic empowerment.

Participant Groups

As mentioned in Chapter 3, Methodology, the key participants were members of the general public who would inevitably enjoy and learn from the exhibition. Each group represented a subset of the end-users who would engage with the designed enclosure. Consisting of designers, volunteers and exhibition guests, these groups transformed the design process and product through their participation.

Designers across disciplines and age-groups were mainly engaged in the project as the artists featured in the exhibition. In order to recruit these participants, a video that explained the purpose of the exhibition and posed the question “What is equitable shelter?” was presented to multiple groups of designers at the ISU College of Design (CoD) and professional design firms in Ames. Posters were also hung-up throughout the CoD, downtown Ames and local galleries (see Appendix C, Marketing Media). A total of twenty-six designers registered to donate artwork and answered the survey question. Seventeen of these artists submitted artwork, amounting to a total of fifty-nine pieces including paintings, photographs, textiles, furniture, illustrations, watercolors and collages. Through their participation, the designers demonstrated empathy not only for the people whom the partner organizations served, but for their friends and neighbors who were not aware of the problems caused by a lack of equitable shelter. For this reason, many of the artists attended the exhibition, sharing their work and the reasons why they cared to participate with friends and family members (see figure 20).

Figure 20. Participating Artist Displays Work to Guests

Volunteers also demonstrated a commitment to empathetically empower their neighbors with knowledge about equitable shelter. These men and women voluntarily assisted by constructing and deconstructing the exhibition enclosure, overseeing artwork drop-off and supervising the artwork during the three days of the exhibition. Volunteers were primarily recruited during the same presentations as the designers, followed up by conversations, e-mails and phone calls to ensure participation. They were welcome from any discipline as long as they were eighteen years of age or older, in accordance with Iowa State research guidelines. A total of forty-four volunteers participated, four of who also donated artwork for the exhibition. Of the forty other volunteers, ten were in a design-related discipline including architecture, interior design and graphic design.

The input of the volunteers influenced the course of the project, demonstrating how diverse participants can offer complementary ideas and abilities to design processes. One volunteer suggested using the bandsaw in the woodshop to halve the plastic milk jugs instead of cutting them by hand as the exhibition coordinator had planned. Another volunteer devised a secure technique for screwing the corner-joint pieces together, which was used in the final design because it was a better solution that the original detail. Even though thirty of the volunteers were not designers, suggestions like these proved to be valuable contributions that saved time and helped stabilize the physical structure. The volunteers, in the end, invested the most time in this project, lending up to eight hours at a time so that the general public could experience the exhibition.

Figures 21 and 22. Survey Responses Changed the Enclosure

The final sub-group of design-users that influenced the project was the exhibition guests. The majority of these participants were not formally recruited, but contributed to the research by walking through the exhibition and then helping to transform it via an interactive survey question (see figures 21 and 22). They were also given the option of participating in a silent auction of the art pieces. For the first two days of the exhibition, when the display was in the College of Design, the majority of people within this participant group were Iowa State design students, faculty and staff. In the final day, the exhibition attracted local Ames citizens, Iowa State alumni, students outside of the College of Design and designers who had donated work.

Figure 23. Campus Newspaper

Featured FO(u)R WALLS

Various advertising efforts were made to attract the public to this event, including an article featured in the Iowa State Daily on February 19, 2013 (see figure 23, see Appendix C, Marketing Media), fliers in local grocery store aisles and banks (see figures 24, 26 and 27), verbal announcements to two churches in Ames and posters throughout the ISU campus (see figure 25). Though the total number of exhibition guests was not tallied, it is estimated that two hundred and fifty guests toured the exhibition. A total of thirty-eight people answered the survey question and thirty placed bids on art pieces, contributing to the experiment through their participation. The engagement of each of these groups demonstrated how participatory practice empowers participants to influence both the design process and resulting product.

Figure 23, 24, 25 and 26. Flier, Table-toppers at the ISU Caribou Coffee, Fliers at Hy-Vee Check-out Aisles and Fliers and Artwork Displayed at First National Bank of Ames (from top to bottom, left to right)

The Influence of the ISU Administration

The Iowa State administration was an additional participant group that emerged during the development of the project and influenced its realization. Because the project was associated with the University, various offices became involved in the processes of reserving the space, discerning the financial management strategy, ensuring the exhibition would be properly secured, guaranteeing the safety of the project participants and establishing project liability. At least fifteen meetings were set-up with representatives of the Iowa State Foundation, College of Design Dean's Office, both the Police Division and Parking Division of the Office of Public Safety, Office of Risk Management, Office of Environmental Health and Safety, Office of Event Management, Facilities Planning and Management, Student Activities, VEISHEA Planning Committee, Office of University Council and the Accounting Office. Of these meetings, two involved more than ten people from these various offices and consisted of a formal presentation about the purpose of the investigation, to research equitable shelter, and the proposed process that it would require, the physical design and construction of an exhibition. Though these design-users were not expected to play such an integral role in the outcome of the experiment, they participated and shaped the project via their concerns more than any other participant group.

Their influence predominantly affected the timing and location of the exhibition, and the design had to respond to these changes. The exhibition was originally scheduled for the entire week of VEISHEA to maximize participation and data collection. This schedule was reduced to the final three days in response to the concerns of the Offices of

Campus Safety and Risk Management. These offices required 24/7 supervision if the exhibition was going to be a permanent installation. Because the chances of recruiting daytime supervision were much more favorable than recruiting volunteers to supervise overnight, the permanence of the installation needed to change.

Figure 28. Northeast View of the FO(u)R WALLS Exhibition on the MU Terrace

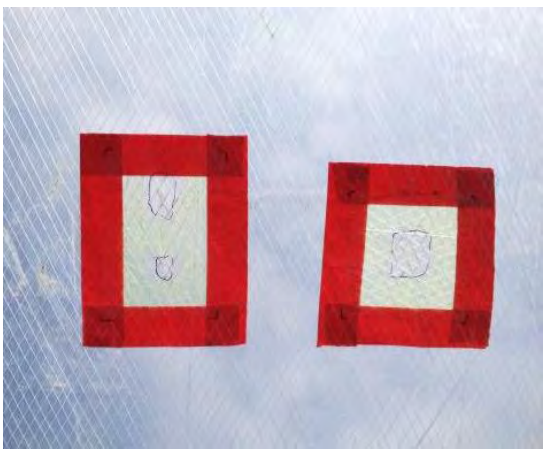
At the request of the ISU administration, the physical design of the exhibition enclosure was transformed into a demountable kit of parts. The structure consisted of twelve walls and a roof that could be put up and torn down in ninety minutes (see figure 28). Artwork was stored securely overnight and required a half hour set-up and tear-

down each day. “Curtains” were designed to seal the openings of the structure overnight so that no one could enter the enclosure and possibly harm it or themselves. At the request of the Office of Event Management and with the help of volunteers, two workshop days and installation tests were conducted. These revealed that the structure took two hours to set up or tear down (see Appendix B, Experimentation). The entire process took at least six volunteers to complete and volunteer interest was not strong enough to have the exhibition open for longer than three days.

The administration also influenced the exhibition location. Though the terrace outside of the Memorial Union was primarily selected for its visibility, another advantage was that the space could be reserved through the Iowa State Office of Event Management several months in advance. To complete this online reservation, the exhibition coordinator partnered with a student organization called Design Across Boundaries (DaB) that practices social architecture via community design work. This reservation process instigated the series of inter-office meetings mentioned above. Though the form was submitted online in the final week of January, the location was not confirmed until the last week in March, two-and-one-half weeks before the exhibition began.

One of the main reservations of the administration was the proposed site’s vulnerability to weather. This vulnerability was, in the end, the reason why the exhibition was not installed on the terrace for two of the three days that it was open. The Office of Event Management requested a foul weather plan one week before the exhibition opened, which they approved on the premise that the project would be moved

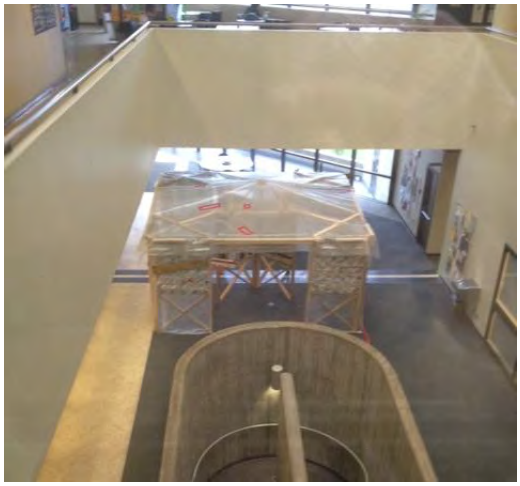
indoors if high winds were predicted. The enclosure roof had been carefully designed to protect against wind and rain (see figures 29 and 30), but the weather was cold and rainy enough that participants were unlikely to venture outside to see the artwork and respond to the survey (see figure 31). The back-up plan that the administration had requested proved to save the day.



Figures 29 and 30. Epoxy and Duct Tape Roof Patches and Raindrops Leaking from the Ceiling of the Lightfoot Forum

Less than twenty-four hours before the exhibition opened, the Dean's Office of the College of Design agreed to host the exhibition for the first day and it was installed in the Lightfoot Forum on the ground floor of the CoD. Unfortunately, precipitation persisted overnight and actually transpired into snow (see figure 32). The College allowed the exhibition to stay inside the building the following day on the condition that it moved to a less central part of the Forum (see figures 33 and 34). That evening, once the weather had cleared, volunteers helped relocate the exhibition to the Memorial Union terrace, where it was open as scheduled the final day.

Figures 31 and 32. Day One Rain on the Terrace and Overnight Snowflakes, both surrounding the sign that told potential guests about the change in location



Figures 33 and 34. Relocating the Exhibition Components via a Pallet Jack and the Day Two Location on the South End of the CoD Lightfoot Forum

Overall the influence of the Iowa State administration proved to be a helpful hurdle in the design process. Though the exhibition coordinator possessed privileges associated with being a student, including access to campus spaces, the project was still subject to sources of power that superseded that privileged status. In spite of these

differences, each group's concerns and desires for the project were considered, thereby demonstrating how participatory practice has the potential to generate empathetic empowerment (see figure 35).

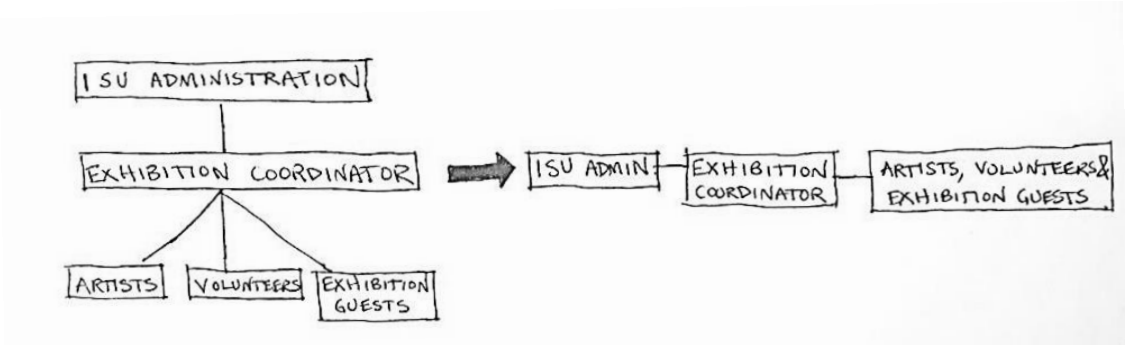


Figure 35. Diagram of Participatory Design Process Empowering the Exhibition Coordinator and Project Participant Groups

Communication Platforms

Web-based communication platforms were an important component of the exhibition, facilitating the coordination of multiple types and numbers of participants. The exhibition coordinator established a website, e-mail account, Facebook group, profile on 32auctions.com and account with VolunteerSpot.com to facilitate easy access to information about participating. Created using Wix online web-design services, the website was entitled four-walls-ISU.com. This was the primary communication platform and it served as a globally-accessible location for sign-up forms, project updates and links to the various other web-based platforms. The website homepage featured the artist recruitment video and a brief overview of the exhibition, introducing the question "what

is equitable shelter?" through the video. The site banner directed visitors through six main pages that included information about how to participate: ABOUT, ARTISTS, AUCTION, VOLUNTEER, SPONSOR and CONTACT (see Appendix C, Website Documentation).

The website went live on January 23, 2013. As the experiment progressed, multiple other platforms were integrated into the project. The contact form on the website linked directly to an e-mail account that was set up through g-mail to mitigate questions and facilitate participants: four.walls.ISU@gmail.com. A Facebook group was instigated February 20, 2013 to reinforce artist and volunteer recruitment efforts. This group began with over 1,000 members and reached an internationally diverse audience (see Appendix C, Facebook Group Documentation). In addition to these platforms, the art auction was managed through an online silent auction system using 32auctions and volunteers signed up both through a form on Google Documents and a volunteer management system called VolunteerSpot. Two volunteers stepped into leadership roles to help manage these platforms. The Artist Manager helped establish the artist profile pages on the website and communicated with the designers who donated artwork about pertinent deadlines. The Volunteer Manager oversaw the VolunteerSpot account and Google document sign-up, sending regular e-mail correspondences to recruit and inform volunteers.

Platforms and interim communicators such as these are an integral part of participatory practice. The contributions of interested and available constituents are

limited if they cannot communicate with designers. This exhibition demonstrated how communication channels can empower participants.

Physical Components of the Exhibition Enclosure

Including partners in this project offered insight into the methods that their constituents use when constructing shelter and engendered empathy and respect for those individuals. Rather than using an existing space or purchasing materials, homeless individuals and people living in informal settlements are known for constructing stand-alone shelters with found or donated materials. This project increased empathy towards these populaces, as well as participants' motivation to empower them, because the materials were also found or donated. The final creation was a unique assembly that displayed the artwork and protected both it and the guests from the elements. By integrating readily-available materials, the design was cost-effective, participatory and creatively engendered empathy by communicating the problems associated with the lack of equitable shelter (see Appendix B).

Cost-effectiveness was a priority within this project because it was a noncommissioned venture, it is a high priority for the partners' constituents and it had the potential to engender empathy for people without much money to invest in the spaces that they inhabit. Following the example of many people without equitable shelter, found or donated materials became the building blocks of the enclosure design (see table 4). Though there were hundreds of physical pieces that made up this project,

four materials will be highlighted as the primary physical elements that influenced the design: shipping pallets, milk jugs, plastic film and lumber.

	Material	Origin
Found	Scrap wood	ISU CoD scrap pile
	(12) Shipping pallets	Lowes rear parking lot, Sauer-Danfoss warehouse
	Plastic film	Weitz Construction site adjacent to ISU CoD
Donated	(~100) Plastic milk jugs	Co-workers, friends, family, CoD students/faculty/staff and CoD café
	Paint	Choice Painting & Decorating
	(80) 8’ - 0” 2x4s	Munn Lumber
	Screws	Nielsen Farm, Netton Carpentry
	(~350 LF) Red duct tape	3M

Table 4. List of Materials and Place of Origin

Shipping pallets were the first of the materials selected because they were a commonly discarded material in the local environment and possessed an amount of surface area that could potentially display the artwork. Milk jugs were the next key ingredient selected because they could be arranged similarly to shingles on top of the pallets and offered potential to keep out rain (see Appendix B, Experimentation). In spite of this innovative concept, the rate at which the milk jugs were donated and the amount of time and material required to construct a shingled pallet mandated that another key material be used in the project to protect the artwork and guests from the weather: plastic film from a nearby construction site.

The plastic film was found on the construction site adjacent to the ISU CoD and procured in stages as the General Contractor allowed. It was originally used to shield construction workers on the upper stories of the emerging building from high winds and rain, so the material was built to endure the elements. This material proved invaluable in the final enclosure design, as it actually did keep out rain that leaked into the CoD atrium on the first day of the exhibition and protected the artwork from the wind on the day that it was outdoors.

Using these found and donated materials generated empathy and respect for people who rely on available materials. This level of dependency and reliance on forces outside of one's control requires enormous creativity to make pieces fit together. For example, the pallets were constructed from gnarly wood and weighed between twenty and forty pounds, making them difficult to nail into and challenging to move around. They also came in varying shapes and sizes, which made it impossible to stack them atop one another and utilize in the final design as structural components. Without structural support, the enclosure could not enclose, so a creative solution was required. Limited by the constraints of using found or donated materials, experimentation with some 2x4s found in the CoD led to a design detail that used the 2x4s to connect the pallets to each other (see figure 36).

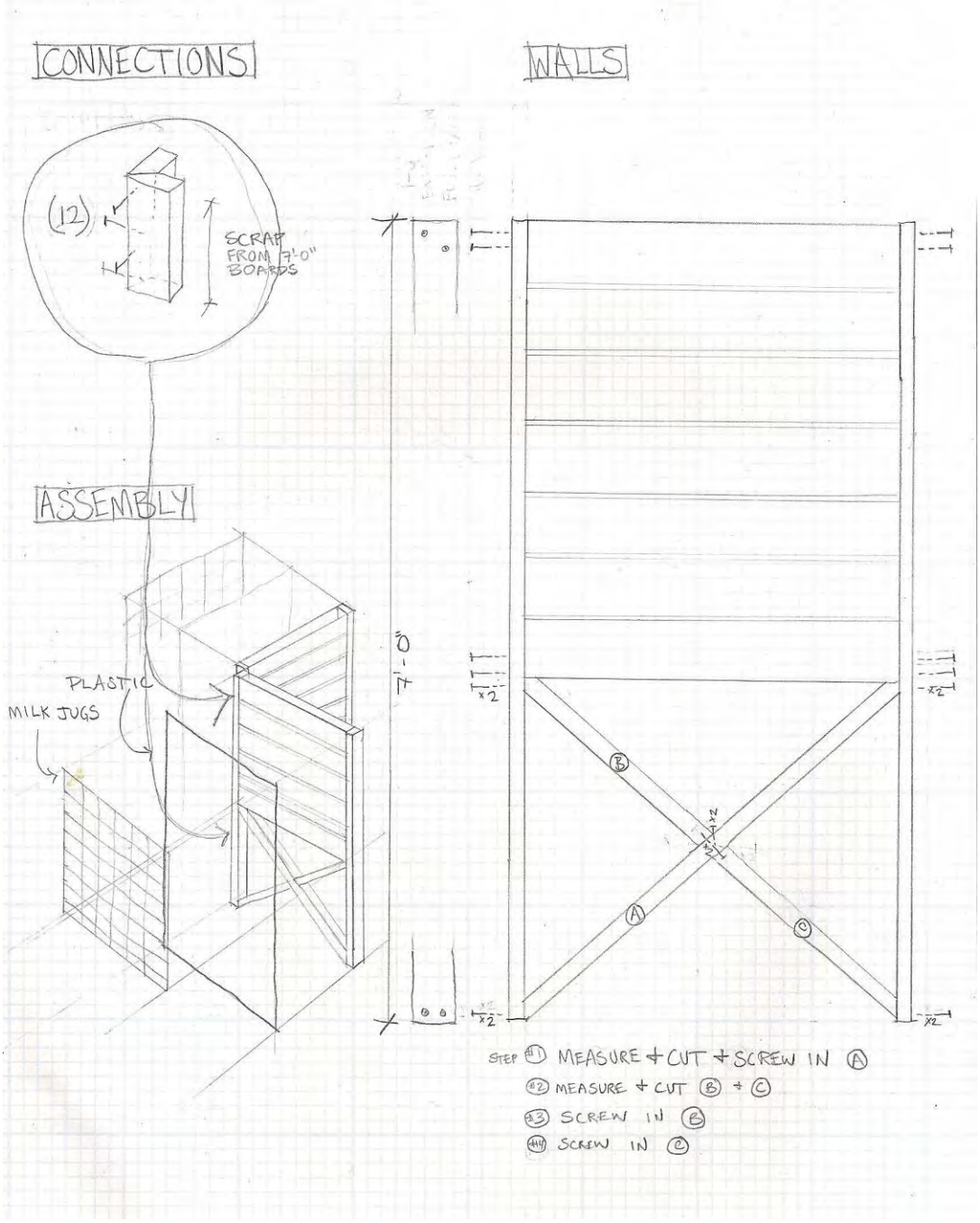


Figure 36. Wall Component Connection, Assembly and Elevation

The final design, therefore, overcame the obstacles presented by the heavy, tough wood and the difficulty of developing self-supporting elements from the pallets. Once the solution was identified, a local lumber yard agreed to be a financial partner in the project and donated eighty 2x4s to complete the design. This new material influenced the overall structure because the wood was kept in lengths over 3'- 0" whenever possible so that it could be donated to the Habitat for Humanity Restore after the exhibition (see Appendix C, Donation Receipt). This scenario helped the exhibition coordinator better understand the intuitive intelligence of many people who do not have access to equitable shelter. These individuals typically lack access to tools and training but possess a need for shelter that is both self-supporting and recyclable. The construction volunteers also took part in the realization that people in this position could do far greater things with their creativity if they were empowered.

Welcoming partnering non-profits into the process of this exhibition gave the design form and demonstrated how participatory practice can engender empathy, the precursor to genuine empowerment. The final physical presentation resourcefully paralleled the improvised structures constructed by many people who are homeless or living in slum settlements, consequently achieving the design goal of utilizing their methods to creatively communicate the problems associated with a lack of equitable shelter.

Empathetic Empowerment Creates Equitable Shelter

Participatory practices utilized by designers like the Rural Studio and

demonstrated through FO(u)R WALLS illuminate how including participants in a project generates empathetic empowerment. Socially-conscious architects design alongside and even fund-raise with community groups. The exhibition at ISU engaged both designers and design-users via communication platforms and the design of a physical enclosure.

Involving end-users in design processes like these is a necessary means to attaining equitable shelter. Welcoming people into the design process allows them to express their needs, including the need to create safe, weather-protected environments as demonstrated by the concerns of the ISU administration. Participatory practice also allows people to communicate their goals for self-actualization, self-expression and self-direction. By empowering the people affected by design with a voice and empathetically weighing their concerns, equitable shelter can be realized and subsequently advance social justice (see figure 37).

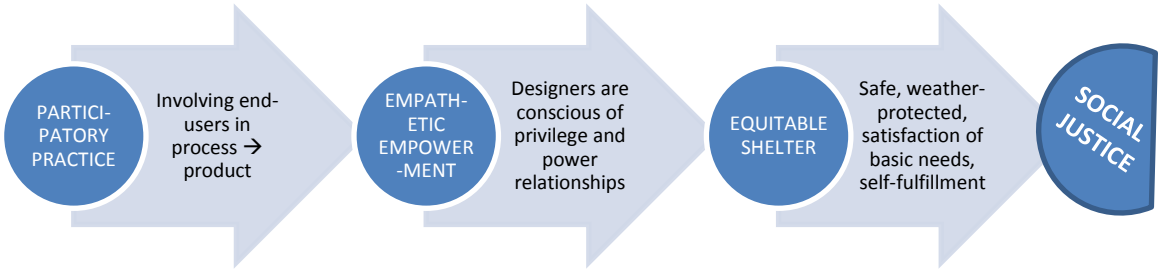


Figure 37. Participatory Practice Leads to Equitable Shelter

Proactive Practice Leads to Equitable Shelter

Proactive Practice Generates Equity

Architects that are exercising proactive practice are driven to seek out solutions to issues regardless of financial or reputational incentive. This emphasis on meeting genuine needs overlaps with the equity framework discussed in the literature review. Creating equity requires solutions to be filtered through cultural context and relevancy to the problem at hand. As demonstrated by the international organization Architecture for Humanity (AFH) and architects like Teddy Cruz, this is exactly what proactive practice achieves. The FO(u)R WALLS exhibition emphasized this practice by utilizing a university context, which engaged college students to increase their awareness and facilitated a financial partnership with ISU. The exhibition also relied on financial partners outside of the university who believed in the cause of the project, which allowed the exhibition to be free for guests and therefore more beneficial to the non-profit partners. These examples reveal the ways that proactive practice is creating equity, which is an integral part of equitable shelter and social justice.

Examples in Social Architecture

Socially-conscious, proactive architecture is making communities around the globe more equitable. Architecture for Humanity's first project, as covered in the literature review, was an international design competition for refugee housing. Even though Cameron Sinclair was not commissioned by the war refugees in Kosovo to host

this competition, he identified a need, filtered it through cultural relevance and deduced that those refugees lacked emergency housing and one way to provide it was by bringing the need to the attention of designers who could provide it. Rather than focusing on equality, which could have resulted in four-bedroom, two-bathroom schemes fit for the American suburbs, Sinclair set forward guidelines that were relevant to the context of the problem. Teddy Cruz's proactive work at the micro-scale of the neighborhood also generates equitable solutions. By diving into the Mexican culture and working with organizations that represent the community, Cruz and his comrades are designing pertinent solutions to real problems. These designers are examples of social architects who proactively work at the scale of the neighborhood to identify needs and solve them, increasing equity throughout the world.

Examples in FO(u)R WALLS

The exhibition demonstrated proactive practice by working within a university setting and relying on financial partners for support, rather than the exhibition guests or the non-profit partners. These examples helped to generate equity because hundreds of college students were exposed to the problems associated with a lack of equitable shelter in a culturally-relevant manner, concurrently being challenged to consider their role in its advancement. In addition, the monetary contributions from ISU and private companies made the entire exhibition possible while shifting resources towards people without equitable shelter.

University Context

Hosting FO(u)R WALLS at Iowa State University was a practical choice in regards to increasing local participation and locating the display at a public site, but it also fell in line with proactive practice. The context of a university increased awareness among college students and did not require a large financial investment for space rental or labor.

Ames is a college-town, with a typical annual enrollment of twenty-five to thirty thousand students primarily completing undergraduate degrees (Iowa State University). The exhibition coordinator identified that of the thousands of college students on the ISU campus, relatively few had seen poverty either within or outside of North America and only a slightly larger percentage had interacted with homeless individuals within their own communities. These observations, initially based on personal conversations, were validated during two impromptu raise-your-hand assessments during presentations about FO(u)R WALLS for CoD classes. Without exposure to the problems associated with the lack of equitable shelter, students were unlikely to become change agents.

The identified need was awareness among students, especially design students. Gamez and Rogers, among other socially-conscious architects, emphasized the importance of progressing social architecture via the academy. As covered in the literature review, they consider the university a “front line combatant” (Gamez and Rogers 23) because of its legacy of transforming students and its financially-sustainable structure for design activism.

The financial structure that these authors referred to played a part in FO(u)R WALLS. Despite the fact that procuring the site on the MU terrace entailed multiple meetings with the ISU administration, it was ultimately procured free of charge. The Office of Event Management agreed to provide both the space and electricity at no cost because the project was benefitting non-profit partners. Additionally, the VEISHEA committee waived obligatory fees and the CoD did not charge for the use of the Lightfoot Forum. Like many projects completed by socially-conscious architects, Palleroni for example, the financial overhead of the University allowed the project to happen without a wealthy patron.

Without the financial support of Iowa State University, this project could not have been completed and none of the exhibition guests would have been exposed to the framework of equitable shelter. By engaging students in this project through an exhibition, they were invited into a familiar tool in American culture for exchanging ideas. Whether they donated artwork, volunteered, or simply toured the exhibition, each student involved in the project was forced to consider their role in generating equitable shelter and decide whether or not it was a priority for them. Though the long-term impact of the exhibition on individual students' lives would be difficult to measure, if even one student committed themselves to being an agent of social change as a result of their involvement, the project helped to generate equity,

Financial Partnership

Even though ISU covered a number of the project's financial costs, the fact that the exhibition was not commissioned by the non-profit partners, nor paid for by exhibition guests, required that financial partners share in the monetary burden of the research. The anticipated costs necessary to achieve the project goals included a small percentage of the construction materials, the project website and printing for advertisements. Recruiting potential financial partners for these expenses began in late November as the project began to take form.

Design firms were the first targeted financial partners because they were invited to participate in the exhibition by contributing both money and artwork. Initial contact was made with three architecture firms that practice in Ames, instigated by a brief, introductory e-mail and followed-up each time by an in-person conversation. Each meeting included a brief verbal overview of the project goals, an explanation of the hypothesized definition of equitable shelter, the artist recruitment video and an invitation to financially support the exhibition in exchange for recognition on the project website and publications. Though two of the three firms expressed initial interest in subsidizing the cause, a means to channel funds was not established until four months later.

After multiple conversations with the ISU administration and the Emergency Residence Project, a donation system was established at a local bank. Soon afterwards, a list of businesses in Ames was generated by the Financial Partnership Manager, a young professional with a background in marketing and a desire to volunteer with FO(u)R WALLS. These companies were contacted because they either directly impacted the

built environment or were known for their charitable giving. Each organization was addressed via e-mails and phone calls, including follow-up e-mails and calls as warranted by correspondences (see Appendix C, Financial Partnership Contact Log). A total of thirty organizations were contacted and seven participated as financial partners. One of these organizations supported the exhibition through a monetary gift, five through in-kind donations and one through both monetary and in-kind donations. Five of the seven companies do work related to the construction industry and one of the six was an architecture office.

Involving financial partners in FO(u)R WALLS helped generate equity because these private companies each made small sacrifices that helped shift significant resources to the partnering non-profits. Rather than using their financial cushion or physical materials to make profit or pay their employees more money, they gave resources that would eventually benefit the non-profit partners' constituents—people without equitable shelter. Ultimately, the investment of these organizations also made the project possible. Without the donated lumber, construction film, website, etc., no one would have been exposed to the exhibition or the idea of equitable shelter.

Equity Creates Equitable Shelter

Proactive practices utilized by designers within AFH and Teddy Cruz's cohort refocus design to address needs in a culturally-relevant manner. FO(u)R WALLS followed suit by identifying the need for awareness among college students and utilizing the financial support of ISU and local financial partners.

By removing the constraints of equal treatment, reputational incentives and financial gain, proactive practice creates equity and facilitates equitable shelter. Equity was integrated into the very name of this term because the framework was so relevant to the way design activists have operated historically. These examples, however, demonstrate that an equity framework generates safe, weather-protected places in culturally-appropriate ways, facilitating self-fulfillment and the satisfaction of basic needs. Proactive practice creates equity, an integral part of equitable shelter and social justice (see figure 38).

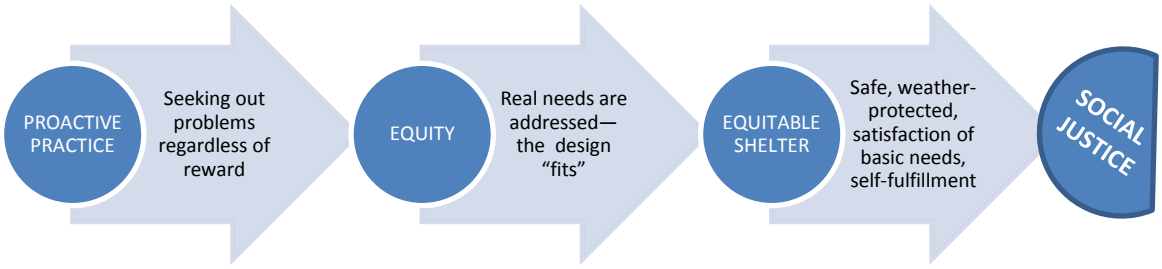


Figure 38. Proactive Practice Leads to Equitable Shelter

CHAPTER 6: CONCLUSION

Summary

This investigation began with the research question, "How can architectural practice be expanded to advance social justice?" A preliminary review of literature on the topics of social architecture and social justice revealed that multiple designers were already investigating this question through both projects and theory. In the wake of their example, an action-based research project was developed that proposed "equitable shelter" as a tool that could help evaluate whether or not architects were advancing social justice. The original conception of this term was that equitable shelter was a merely physical product:

> "*Equitable shelter* refers to safe, weather-resistant spaces that meet the specific needs of inhabitants."

The meaning and social impact of equitable shelter were broadened in definition by an interactive exhibition coordinated during the VEISHEA festival at Iowa State University April 18 - 20, 2013. The design of the exhibition involved two surveys that inquired about the meaning of equitable shelter. One survey was directed towards participating designers and the other towards exhibition guests who were primarily members of the general public, or design-users. The process of designing the exhibition also experimented with three major modes of practice, or "methods of action" (Cuff 4), demonstrated by social architects: inclusive, participatory and proactive practice. The

process involved two partnering non-profit organizations, Engineering Ministries International India (EMI2) and the Emergency Residence Project (ERP), twenty-four artists, over forty volunteers, hundreds of exhibition guests, twelve offices within the ISU administration and seven financial partners. The final enclosure design represented the interests of these groups and creatively communicated the problems that the partners' constituents face by mimicking their construction methods.

The hands-on knowledge gleaned from the interactive exhibition was supplemented by literature on the topics of social architecture and social justice. Each of the primary methods of practice were investigated and then compared with social justice frameworks: spatial justice, empathetic empowerment and equity. Though the systems at work within social architecture and social justice are difficult to disentangle from one another even before hybridizing the fields, inclusive, participatory and proactive practice possessed overlapping ideas as spatial justice, empathetic empowerment and equity, respectively.

This discovery brought new meaning to the results from the surveys, which were compared against each other and a slightly modified definition of equitable shelter that arose in the midst of the experiment. If the term equitable shelter advanced social justice, then each type of practice espoused by socially-conscious architects could be evaluated in light of their relationship to social justice frameworks, including this new concept. The final meaning and social impact of equitable shelter, as informed by the project participants, is as follows:

> *"Equitable shelter* is an environment that ensures the safety of inhabitants and protection from the elements, acting as a gateway to the satisfaction of basic needs, self-actualization, self-expression and self-direction."

This description encapsulated individual fulfillment coexistent with communal benefit, aligning closely with the literature on social justice. This definition demonstrated that equitable shelter, both in the form of a product and a system that generates products, advances social justice.

The definition of equitable shelter was translated into a filter for social architecture. Did the movement create equitable shelter and therefore advance social justice? By evaluating each of the three practices through the abstract frameworks from social justice theory and the real-world lessons from the design of the exhibition, each mode of practice verifiably led to equitable shelter.

Inclusive practice proved to generate spatial justice by spatially reorganizing local environments to facilitate opportunities for people at both the global and local scales, regardless of their economic status. Participatory practice was predicated on an active examination of unearned social privileges and disempowering relational structures, engaging end-users in the design process so that their participation influences the design product. Proactive practice refocused design to address needs in a culturally-relevant manner by removing the constraints of equal treatment, reputational incentive and financial gain. Each mode of practice and the social justice framework that they corresponded most closely with demonstrated an emphasis on creating safe, weather-

protected environments that facilitated the satisfaction of basic needs and self-fulfillment: equitable shelter (see figure 39).

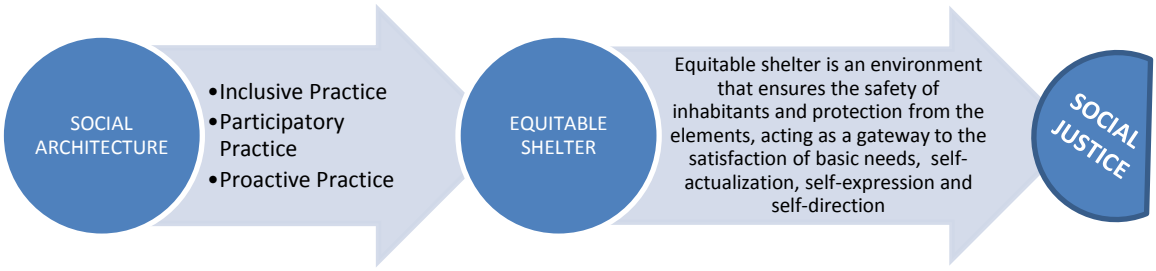


Figure 39. Social Architecture Leads to Social Justice

Conclusion

"Architecture, at its best, is not just a beautiful form, the arrangement of materials and space, but an enabler of positive change in day-to-day life, a place where identity, character, daily life, and even the spirits of the users are manifest" (Bell, "Pre- and Post-Form" 77). The leaders of the social movement in architecture are expanding the practice. Architecture has been transformed into a social art—a collective enterprise that can positively aid society through inclusive, participatory and proactice practice. Each of these modes of practice align with social justice frameworks to generate equitable shelter. This framework evaluates architects' collective ability to design safe environments that are protected from the weather, offer access to basic needs and facilitate self-actualization, self-expression and self-direction. Social architecture is

doing exactly that. This movement is expanding the practice as a whole to advance social justice by generating equitable shelter. As one of the advocates of this movement has explained, “Design can make a difference. Designers, make a difference” (Hosey 38).

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APPENDIX A: SURVEY DATA

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	How do you define equitable shelter?	Safe	Non-physical Elements	Satisfies Basic Needs	Weather-protected	Home	Sanitary	For all	House	Comfort	Responsibility	Affordable	Sustainable
1	Shelter available to anyone claiming need, without regard to any sort of 'status' or profiling.			1				1					
2	Just giving somebody a makeshift shelter isn't enough to be considered habitable. Personally living in the midwest the protection from the cold, rain, heat/humidity, and even animals or people, is just as important. There is a very big difference from a house and a home too. The comfort of your home and family is the most important aspect of a healthy lifestyle. The help can't just stop at the material aspect of a shelter.	1	1		1	1				1			
3	A house minus vermin with heating & cooling, a decent ratio of rooms to people, working bathroom, running water and electricity. Having access to a proper grocery store is always a plus for raising a family.			1	1								
4	A place where the is equality and fairness in terms of infrastructure and environment. There should not be any discrimination on the basis of race, color, caste or sex in such places. It should be comfortable, sustainable and well eqiped with proper basic facilities for living.		1	1						1			1
5	I would define it as being a right for all people to have a place to shelter.							1					
6	I do not know much about equitable shelter, I do know however that everyone needs a place to call home. In the USA we are mostly unaware of how poor other countries are, and I believe a lot of folks take for granted what we have. It's necessary to help out others and give some hope and love to the less fortunate. I am part of a community here in Ventura CA that cares about the homeless and wants to do something to change it.. I do what I can mostly through volunteering and through my art. My "faces of change" series of illustrations are an effort to raise awareness about the homeless population in Ventura.		1			1							
7	Forms of shelter that can be equated with the single function associated with a house, but push the limits of what an american family home would be, whether that be good or bad circumstances.					1			1				

	How do you define equitable shelter?	Safe	Non-physical Elements	Satisfies Basic Needs	Weather-protected	Home	Sanitary	For all	House	Comfort	Responsibility	Affordable	Sustainable
8	I think of Equitable shelter as the availability of quality housing to all people; where housing doesn't mean a suburban house, but a shelter which adequately provides protection from the elements, and fulfills the basic needs of a person.			1	1			1	1				
9	Housing that provides protection from the elements with culturally appropriate features that support human dignity.		1	1	1				1				
10	Humans have basic needs, and in many places in the world those needs aren't met. Shelter is one of those needs. We seek to be equitable all of these. Not that each person would have the same thing, but rather that each person have access to at least meet their basic needs.			1									
11	Shelter and/or housing that is adequate and worked for and that the eventual residents contributed to. It is not imposed or oppressive.		1						1				
12	Creating and maintaining fair or reasonable costs for livable homes for homeless and low income families. Also to help create opportunities for struggling families to be and feel successful.		1			1							
13	I consider equitable shelter to be shelter that is sturdy and in a permanent place. It should also be safe - and a space someone can call their own.	1	1										
14	Equitable shelter is safe housing that meets the basic human needs of all people worldwide. It includes adequate space, climate and weather protection, potable water supply and sanitary sewage services.	1		1	1		1	1	1				
15	Affordable protection from the elements that is also a safe place to call home.				1							1	
16	An environment which protects inhabitants from weather and natural forces of nature.				1								
17	[illegible] community's basic needs- a solid base, walls, and roof to protect them from the elements, with adequate cooking, sleeping, and toliet areas and appropriate insulation for their climate. I believe it should provide for their needs in order to free them to pursue education and other ways to better their lives. According to Maslow's hierarchy of needs, this can only be done once their physical needs are met.		1	1	1								

	How do you define equitable shelter?	Safe	Non-physical Elements	Satisfies Basic Needs	Weather-protected	Home	Sanitary	For all	House	Comfort	Responsibility	Affordable	Sustainable
18	I would define an equitable shelter to not simply be a roof over your head, but an architecturally safe home to live in.	1				1							
19	An equitable shelter is a necessity for all of us to give rise to a better future. It must be provided to every individual so that they feel safe and comfortable in an environment filled with hardships and competition. In today's world, there is so much competition that when a person fails, they need a place where they can feel at peace. Where they can stabilize their thoughts. It shouldn't be just a place where they can have access to materialistic things, but, also where they have access to something that provides them the courage to face the world.	1	1							1			
20	Equitable shelter is a structure that meets the needs of it's inhabitants. Physical, emotional, and social needs are the ones that stand out to me first. Physical needs are met with equitable shelter by providing protection from all natural elements consistently and securely. Emotional needs are met through a feeling of safety found in the structure. Social needs are met by having enough personal space necessary to feel ownership in the structure.	1	1	1	1								
21	I would define equitable shelter as a safe, secure, weather- resistant place to live, with access to safe water and sanitation facilities, and a dependable energy source.	1		1	1		1						
22	A protected/protective place to live.	1			1								
23	I define equitable shelter as safe, clean shelter that protects the health, safety and well-being of any person.	1	1				1						
24	To me equitable shelter is the idea of a place that fulfills the purpose of shelter in the region in which it is located. I feel like wherever you are they are always different, especially when it comes to what the people think is. What someone is living in, in say a third world country and they believe is shelter is something totally different then here. I believe sometimes we are the ones that lack the understanding of shelter. What is fair may not be the same where we are. To me shelter is my home or a building, to others a tree or a newspaper may be.			1		1							
	TOTALS	9	11	11	11	6	3	4	5	3	0	1	1

	Equitable shelter is...	Safe	Non-physical Elements	Satisfying Basic Needs	Weather-protected	Home	Sanitary	For all	House	Comfort	Responsibility	Affordable	Sustainable
1	Clean, fair, happy, enough, pride, foundation & a worldly necessity		1				1						
2	Being able to let desire and responsibility to self mingle		1								1		
3	A home as opposed to a house					1							
4	Safe, affordable, and adequate	1										1	
5	Empowering, it is liberating, and it is transformative												
6	Protection from the elements, clean, potable water source, sewage system, natural light, electric source, furnished, food preparation facilities			1			1						
7	To mentally equate structure with shelter. walls without home					1							
8	Its creative and very thoughtful project. wish you the best												
9	Safe and protects against the elements. needs to be closed in and its not safe	1			1								
10	safe and protected from the elements. seeing you deal with the rain while making this has definitely impacted me	1			1								
11	Sustainable and a great view on art												1
12	A house full of life and love, it's amazing to touch the walls with a texture		1						1				
13	The greatest!												
14	Practical shelter, comfort, and HOPE		1	1						1			
15	An attitude, a task to provide shelter for all--shelter that protects and nurtures, our responsibility	1			1			1			1		
16	Everyone's responsibility										1		
17	Eye-opening and inspiring		1										
18	A gateway to education, improved health and safety, community connectedness, and financial security	1		1									

	Equitable shelter is...	Safe	Non-physical Elements	Satisfying Basic Needs	Weather-protected	Home	Sanitary	For all	House	Comfort	Responsibility	Affordable	Sustainable
19	The foundation for success in so many other areas: health, education, employment, happiness			1									
20	Safe, sanitary, sufficient, secure, special	1					1						
21	A home for all							1					
22	Beautiful and inspiring to those who live there and others		1					1					
23	Needed by many throughout the world												
24	Protection from the elements												
25	A just safe haven	1	1										
26	Where you feel safe	1											
27	A place to feel calm									1			
28	A place you can call home					1							
29	A place where you can be safe	1											
30	A home not just a house					1							
31	Thoughtful and eye-opening												
32	A place that meets one's fundamental needs AND feels like a home			1		1							
33	Basic needs are met-this is a reality for everyone			1									
34	A consistent place to call home-no matter how you define home					1							
35	A place where basic needs are met			1									
36	Safe, quiet, warm	1			1					1			
37	A place where you feel safe	1											
38	Accomplished when all people have a safe, dry, warm home with access to water and sanitation AND LOVE	1	1	1	1	1	1						
	TOTALS	12	8	8	5	7	4	3	1	3	3	1	1

	Survey	Safe	Non-physical Elements	Satisfies Basic Needs	Weather-protected	Home	Sanitary	For all	House	Comfort	Responsibility	Affordable	Sustainable
1	Designers	9	11	11	11	6	3	4	5	3	0	1	1
2	Design-users	12	8	8	5	7	4	3	1	3	3	1	1
	TOTALS	21	19	19	16	13	7	7	6	6	3	2	2

APPENDIX B: ENCLOSURE DESIGN DOCUMENTATION

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INSPIRATION

01 *Hannah Rosenthal is a graduate student studying architecture and doing research on an architect's role in preventing informal settlements and homelessness. This exhibition is one component of her thesis project, which aims to define the theme of this exhibition.*

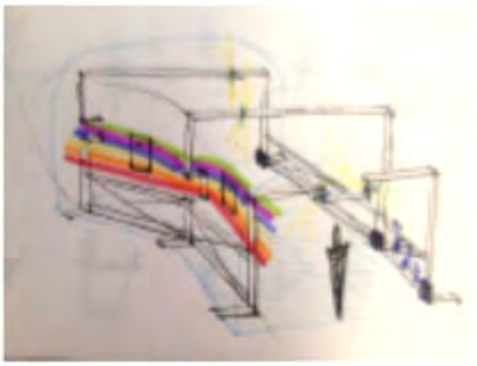
Equitable shelter
refers to safe, weather-resistant spaces
designed to meet the specific
needs of inhabitants

02 *Hannah interned with Engineering Ministries International in summer of 2011. While travelling throughout the country she was exposed to many homes like this one.*

03 *Inadequate housing is not only a problem overseas. An estimated 16,000 Iowans were homeless last year. Our homeless shelters state-wide only accomodate one out of every five homeless individuals.*

04 *In an effort to raise as much money as possible through this project, Hannah released a debut album to frontload the costs associated with this exhibition. To hear her music or learn more about her vision as a musician, please visit her website at http://herosent.wix.com/hannahrosenthal.*

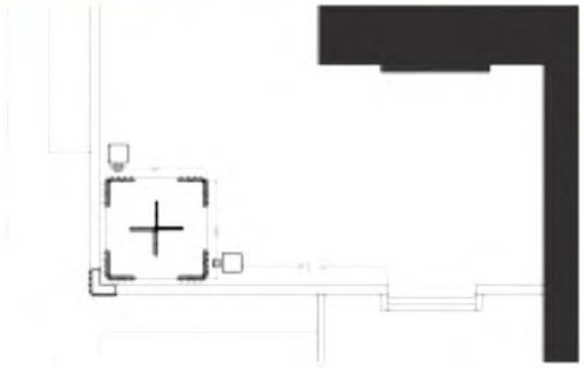
IDEATION

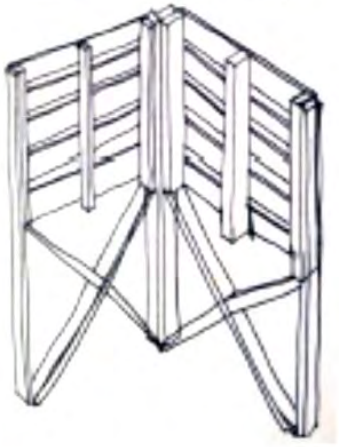


The Memorial Union roof terrace was an ideal location for an art exhibition designed to raise awareness.

The terrace is a high traffic area day and night—especially during VEISHEA. Yet with this exposed location came multiple design challenges. For example, the wind had to be accounted for despite the fact that the structure could not be staked into the ground.

Another challenge to the design was Hannah's effort to empathize with the people whom EMZ and ERP serve by relying upon scavenged materials. The final structure incorporates discarded shipping pallets, milk jugs, donated 2x4s and wind-hardy plastic collected from construction sites. The assembly consists of twelve modular wall components that interlock via framing that holds up the roof.



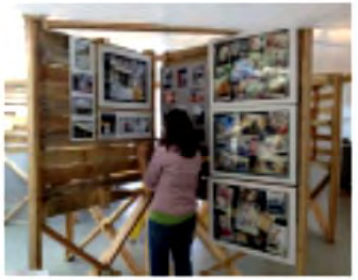


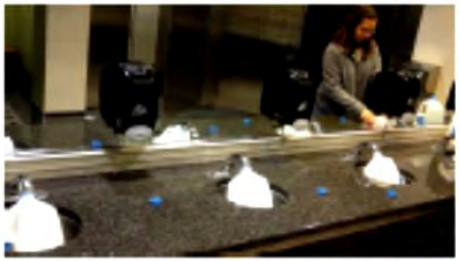
"Shipping pallets proved to be a messy, dangerous material to work with, yet their rugged texture makes the artwork appear vibrant."

EXPERIMENTATION

CONSTRUCTION

IMPLEMENTATION





"At the end of the day, what matters is that people recognize how blessed we are to live the way we do and feel inspired to give of their time and resources to aid those without equitable shelter."

APPENDIX C: EXHIBITION DOCUMENTATION

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Financial Partnership Contact Log 154

Notes from Discussion with Dannah Koeniger

December 4, 2012

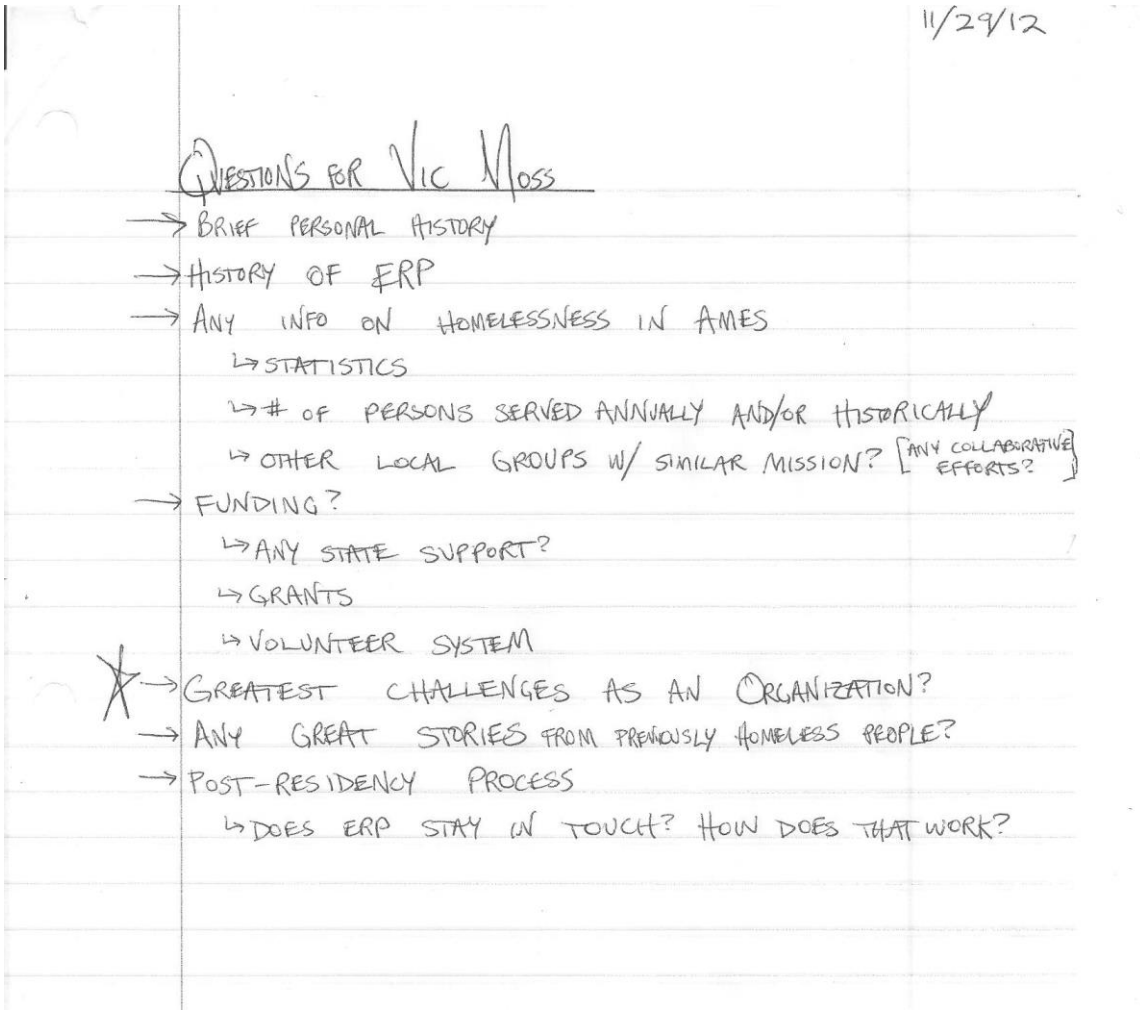
1. Proposed art exhibition
    a. Really liked the art show idea
    b. Suggested to work with Abhishek to submit artwork
2. Theme:
    a. Suggested identifying a theme for artwork
    b. Make prompt more descriptive – it sounds very thesis-like, vague
    c. What am I actually comparing? What are the two things I'm comparing?
    d. "What does poverty look like in the built environment?"
    e. "How do you see the poor interacting with the built environment?"
3. Location: Ames versus New Delhi
    a. Delhi has the extremes—poor are always around, villages-everyone is the same level
    b. Indians just don't commit to things very well – their yeses aren't necessarily yeses
    c. Broaden? Village poverty is important—that's where most of the poor in India live, not in cities
    d. How about a state of India? Involve Abhishek's university? It's in Maharashta—near Mumbai?
    e. Simultaneous exhibit?
    f. Timing-wise it'd be difficult for the staff b/c their busy season is in late winter-early spring
    g. This time of year is not a holiday season in India, so the students would be in school
    h. Dannah is relatively available in the next month and a half
        i. Leaves for Dehraduhn on Jan 10th
4. Potential participants
    a. eMi2 is connected to a high school of foreign born students, lots of Koreans, cheaper school for foreigners, Hudson goes to this school (only 15-20 high schoolers)
    b. In order to involve high school students, it'd be good to give them a specific thing to draw—a little more guidance
    c. Ask Huberth or Abhishek for connections?
    d. Dannah would be happy to ask friends who are foreigners at an Indian school

e. Dannah doesn't know if an Indian educational system would be receptive to this – gets back to challenge of rote memorization within education
f. Art gallery in Delhi – Reflection Art Gallery
    i. They host "creative conscious" workshops where they all paint on a theme
    ii. They do workshops once a month on Thursdays – could be connected to high schools
    iii. They have really good artists
    iv. E-mail Dannah? Her pastor submits work to this gallery
    v. Also do work with people in Sewah Ashram, who are picked up off the street and often destitute
    vi. Non-profit ministry, display their artwork for free, donate one piece to gallery, gallery profits from it
    vii. Not sure if they could necessarily donate anything—but if going for high-schoolers than they would not donate high value artwork
    viii. Could be similar, that in my exhibition they could donate one piece and display others to sell
    ix. It'd be good to talk with this organization—potential connections with high-schoolers, could be a fun thing for them

5. How much money would it cost to hire an Indian intern?
    a. Housing=$300/month
    b. Food=$100/month
    c. Project trip = $200
    d. Project fees = $200
    e. ~$3000 for 6 months unless if they're from Delhi (then ~$1000)
    f. Probably would hire two Indian interns for next fall ➔ $6000 goal?
6. Recruitment videos?
    a. 11x17 posters but mostly point people to website

Notes from Discussion with Vic Moss

November 29, 2011



erp@midiowa.net (1)

INTERVIEW WITH VIC MOSS

NOVEMBER 29, 2012
EMERGENCY RESIDENCE PROJECT

→ ~~4~~ 3 BUILDINGS ARE A PART OF ERP — ONE IS ONLY HALF OWNED BY ERP
→ MOTELS FOR OVERFLOW (45-50 PPL PER NIGHT)
→ BIGGEST THING = WORK W/ FAMILIES FACING EVICTION
  ↳ ~700 PEOPLE (FAMILIES) — THAT'S CAPACITY DUE TO FUNDING
    → PEOPLE CAN'T AFFORD RENT/UTILITIES
→ DON'T HELP STUDENTS TYP — SOME MOMS
  ↳ AMES = 25,000-30,000 (AMES = 2/3 COUNTY)
  ↳ HELPING NEARLY 8% OF POPULATION
  ↳ ONLY PREVENT A FRACTION OF THE EVICTIONS
→ VIC'S STORY
  ↳ DECIDED IN COLLEGE — ENTOMOLOGY, VIETNAM
  ↳ GOOD ADVISER — SWITCHED TO SOC/PSYCH
  ↳ HIRED BY STATE AS SOCIAL WORKER
    → ONLY CHILD ABUSE WORKER IN STORY COUNTY
    → MANY CHILDREN HE HELPED SHOWED UP LATER IN THE SHELTER
  ↳ ONE STUDY — 95% MALE CHILD CHANCE MINORITY ⇒ END UP IN LEGAL SYSTEM
    → DUE TO LACK OF CHORES
  ↳ STRESS = BIGGEST RISK FACTOR IN REGARDS TO CHILD ABUSE, ↑ UNEMPLOYMENT = ↑ CHILD ABUSE
[→ APPLICATIONS ON MON/THURS]
  ↳ "THE WORLD HAS CHANGED" — PAY IS NO LONGER ENOUGH
    → UNDEREMPLOYMENT 30-40%
  ↳ COST OF LIVING — SINGLE MOM W/ 2 KIDS
    → $1750/MONTH — WOULD NEED TO WORK 79 HOURS A WEEK
    → SHOULD PAY 30% FOR HOUSING — ACT. BLANKET ↗

(2)

→ 48% OF RENTERS COULDN'T AFFORD HOUSING
→ NAT'L LOW-INCOME HOUSING COALITION
↳ COVER EACH COUNTY
→ FROM 1980, 1995, 2005 ~~$3.20~~ ⇒ $190 FOR ONE-BED.
49%
60%
↳ FOR PPL THAT HAVE TO TRAVEL, GAS $ IS A PROB
→ WOMAN'S STORY – FORCED EVICTION
→ ANOTHER STORY ABOUT TRAFFIC VIOLATIONS ⇒ LOST CAR, JOB, APARTMENT
↳ PUT HER UP IN A MOTEL, EVENTUALLY LOST CONTACT
→ KIDS IN SCHOOLS – SOMETIMES BUSES GO 'CROSS TOWN TO PICK UP KIDS WHO'VE BEEN DISPLACED
→ VIC'S WIFE IS SPECIAL ED TEACHER – POVERTY IS BIGGEST RISK FOR 11 OF HER KIDS
→ POVERTY IS BIGGEST ISSUE DRIVING HOMELESSNESS
↳ NO SIMPLE ECONOMIC FIX
→ ONLY GOT 1% OF CASES WHEN WORKING W/ ABUSED KIDS
↳ BIGGER ISSUE = HOW TO RELIEVE STRESS
→ ERP FOUNDED IN 1985
→ 1995 – WELFARE CHANGED, LIFETIME LIMITS (5 YEARS)
↳ ENTITLEMENT TO STATE
2ND INT – 14:29 ↳ POOR ARE LEAST EQUIPPED TO ADVOCATE FOR THEIR NEEDS
→ ADC BENEFITS FROZEN AT $367/CHILD, $427/2 CHILDREN
↳ SOCIAL DARWINISM – STILL A PRE-DOMINANT PHILOSOPH IN FAR1

(3)

→ 80-90 ~~PEOPLE~~ INMATES IN STORY COUNTY — POVERTY IN BACKGROUND

→ DEFINITION?

↳ POVERTY = ANYONE THAT DOESN'T MAKE ENOUGH TO MEET THEIR BASIC NEEDS

↳ ACTUALLY POVERTY LEVEL — BACK IN 50's SOMEONE CAME UP WITH A # BY MULTIPLYING COST OF FOOD BY 2.5 — NOT ACCURATE TODAY

↳ POLITICAL BIAS AGAINST CHANGING THE LINE

↳ LISTENS TO "HATE TALK" IN PUBLIC RADIO — DISMISSES EFFORTS TO ANALYZE NATION

→ FUNDING

↳ GOVERNMENTAL LEVEL — STATE/FED < 5%, UNRELIABLE

↳ STOPPED TAKING STATE $ — $40000 TO ADMINISTRATE FOR A $12,000 GRANT

↳ 80% FROM COMMUNITY (INDIVIDUALS, CHURCHES), SOME ARE CHANNELED THROUGH UNITED WAY (15%) — 65%

↳ $400,000/YEAR

↳ COULD BUILD MORE, BUT SKELETON STAFF

↳ CURRENTLY 20ish KIDS HERE

↳ POSITED THE LIMIT ON WHAT NEIGHBORHOOD WOULD TAKE

↳ DRAW FROM ENTIRE MIDWEST, PEOPLE FIND WEBSITE

↳ AMES, IC, DES MOINES (WEST) = MOST EXPENSIVE PLACES TO LIVE IN IA

→ GROWTH OF ISU

↳ BUILDERS OVER-BUILT, POP↑, ↑DEMAND FOR RENTALS

↳ SECTION 8 VOUCHERS AREN'T ACCEPTED BY LANDLORDS

→ HUD → MAKES HOUSING AFFORDABLE BY CAPPING HOUSING BILLS AT 30% OF INCOME

(4)

→ BOSTON (EX) 12 YR WAIT
→ 2 YRS AGO STOPPED TAKING PPL ON LIST, NOW 5 YR WAIT FOR THE LIST
→ PPL STAY HERE 2 WEEKS IN TRANSITIONAL HOUSING, OFTEN HAVE TO EVICT PPL, SOME STAY A MONTH, SOME A NIGHT OR TWO
→ TYP. KNOW THE NEXT ADDRESS OF PEOPLE WHO STAY IN TRANSITIONAL HOUSING
↳ DON'T CLOSE DOORS ON PEOPLE, SAW ONE MAN w/ 1/YR
↳ HELPING ANOTHER GENTLEMAN STAY IN JOB AT POST OFFICE — TRYING TO HELP HIM w/ CAR
↳ REALLY HARD TO BREAK OUT OF THAT POVERTY CYCLE
-> W/O PROFESSIONAL OR TECHNICAL TRAINING THEY CANNOT SUCCEED

4:25 → BIGGEST CHALLENGES
↳ MONEY
↳ COULD CREATE JOBS — BUT PPL NEED TO MAKE IT ON THEIR OWN
↳ FORMULA — ↑ INCOMES, ↑ MIN. WAGE TO REFLECT LIVING WAGE
↳ PEOPLE DON'T DEBATE THIS "POLITICAL FOOTBALL"
→ FOOD STAMPS, HOUSING SUBSIDIES
↳ NO EASY SOLUTIONS — GOOD FACTORY JOBS ⇒ OTHER COUNTRIES
↳ "CHICAGO-INVASION" — PRUITT-IGOE & CABRINI GREEN
→ VIC THINKS THEY SHOULD HAVE BUILT IN MORE SECURITY

(5)

CHICAGO (CONT.)
→ 1/MONTH BUT THEN LOTS MORE CAME
↳ "HAVE TO LIVE HERE 6 MONTHS" TO QUALIFY
→ "PUBLIC RESOLVE DRIVES PUBLIC POLICY"

EMERGENCY
RESIDENCE
PROJECT

A United Way Member Agency
225 South Kellogg, Ames, Iowa 50010 (515)232-8075

Annual Report for Fiscal Year 2011/2012

We assisted 2,178 individuals during the fiscal year. Our two shelter programs gave us an average total of 44.6 individuals housed per night. We also prevented an average of 121 people a month from becoming homeless or from losing of their heat and lights. Approximately 5054 meals were provided. The following breakdown, by program, include 86 duplications as some people were helped in more than one area.

Emergency Shelter: We provided 718 people with 8945 nights of emergency short-term shelter. The average number housed per night was 21.6 individuals who stayed an average of 12.5 nights. Our main shelter housed 292 of the total, and motels were used for 449 people. Twenty three individuals were helped at both places.

Transitional Housing: We provided 38 people in nine families with 8450 nights of this type of shelter. The nightly average was 23 people in the family apartments and the average stay was approximately 9 months.

Homeless Prevention: We helped 1432 people living in 532 households through our homeless prevention program. Approximately 70% of the help went to prevent evictions or to assist with the cost of securing new housing after an eviction. The remainder was either to prevent the loss of utilities or to restore service.

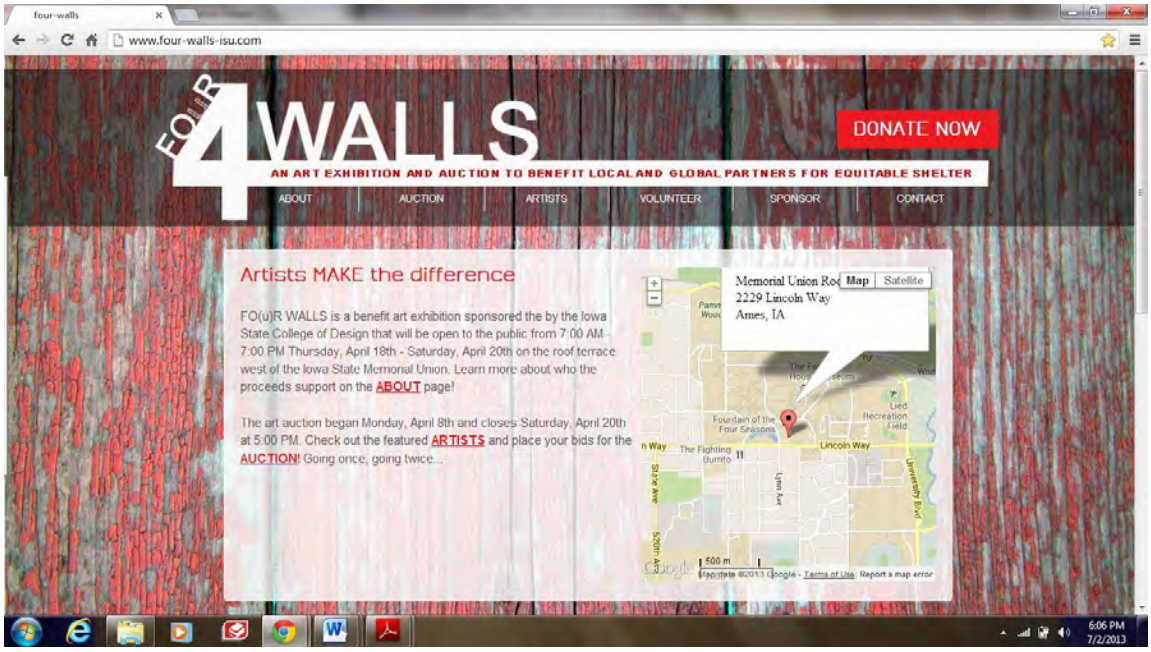
Staff coverage was provided at the main shelter every day for intake, supervision, basic upkeep and maintenance. Assistance, including referrals, was provided to help clients meet other needs including food, clothing, employment, medical care, transportation, and long term housing. Much time was also spent on advocacy and work with other agencies and groups which were trying to help with the needs of homeless and other low-income individuals. Case management and support services for our transitional families were provided by our family services worker.

Referral Sources: Many clients learned of our shelter and homeless prevention services through referrals from other agencies. A partial listing of referral sources includes: Ames Police Dept., Story Co. Sheriff, Iowa State Troopers, Ames Schools, MICA, Red Cross, Mary Greeley Medical Center, ACCESS, Iowa Dept.of Human Services, Story County Community Services, many local churches, Ames and Boone Salvation Army, United Way, Good Neighbor Emergency Assistance, Cherokee & Clarinda Mental Health Institutes, Story County Probation Dept., Legal Aid, Youth and Shelter Services, regional shelters, the 211 information and referral service, the phone book, and the internet. Many also learn of us by "word-of-mouth" from previous residents, friends, and other individuals.

USAGE TO DATE (since August 1985) -- Emergency Shelter: 129,280 nights lodging to 12,720 individuals, Transitional Shelter: 150,154 nights to 711 individuals, Homeless Prevention assistance: 19,842 individuals, Meals Provided: Approximately 159,700. The counts of individuals are the totals from the annual counts and includes duplications as some were helped in more than one year.

Website Documentation

Retrieved July 1, 2013



FOUR WALLS
DONATE NOW
AN ART EXHIBITION AND AUCTION TO BENEFIT LOCAL AND GLOBAL PARTNERS FOR EQUITABLE SHELTER
ABOUT
AUCTION
ARTISTS
VOLUNTEER
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What's this all about?
FOuR WALLS is the name of an art exhibition and auction taking place at Iowa State University in Ames, Iowa. Artwork designed around the theme of "equitable shelter" will be featured during the campus' annual VEISHEA festival from April 18th – 20th, 2013. The auction aims to raise money and awareness about the problems associated with inequitable shelter in both India and the United States. All proceeds benefit non-profit organizations that provide shelter and design services for the materially poor.
who
Artists. Volunteers. Sponsors. YOU.
This exhibition will only be possible with the help of creative and compassionate people like yourself. If you are a painter, sculptor, illustrator, potter--any type of artist--check out the ARTISTS page to discover how your work could be featured in the exhibition. If you're interested in helping to build or supervise the exhibition, sign up to VOLUNTEER. If you or your company want to financially back this project, check out our SPONSOR page.
why
Where we live matters.
Regardless of which city or country we call home, the physical condition of the buildings we inhabit shape our opportunities every day. Habitat for Humanity estimates that one out of every four people in the world does not have a safe, weather-resistant place to call home. There are incredible organizations out there working to help these people--it's time we support them in word and action.
eMi2
Engineering Ministries International India
This project was inspired by an Iowa State student's ties to Engineering Ministries International India (eMi2), an American-based non-profit design firm located in New Delhi. This architectural and engineering firm donates their professional services to people living in material poverty who are unable to pay the steep prices tied to the design of adequate facilities. The organization is hoping to have two Indian student interns join them in the next year in order to inspire more Indians to invest their skills in helping the poor of their country and create opportunities for mutual learning between eMi2's staff and interns. The hope is to eventually have more Indian nationals serving full-time with eMi2. Though the firm faces many challenges associated with hiring these initial interns, the biggest obstacle is raising adequate funds.
That's where FOuR WALLS comes in. For the sake of helping eMi2 design equitable shelter for people who would otherwise live in buildings that do not meet their needs, 75% of the money raised from this exhibition will go to eMi2. To learn more about this organization, check out their website at www.emi2.org.
ERP
Emergency Residence Project
Though the American media often focuses on the poverty of developing nations, Iowans cannot ignore the spatial implications of poverty on our own turf. The Emergency Residence Project (ERP) of Ames, Iowa has been facing those implications with rigor since 1985. ERP provides housing for an average of fifty people each night in both their own facilities and in local motels.
In addition to housing the homeless, the ERP runs a homeless prevention program funded exclusively by private donations. These incredible efforts will be multiplied as 25% of the proceeds from this auction help people without equitable shelter right here in Ames. To learn more about the ERP, visit their website at www.amesshelter.org/erp.
AN ART EXHIBITION AND AUCTION TO BENEFIT LOCAL AND GLOBAL PARTNERS FOR EQUITABLE SHELTER
© 2012 BY HANNAH ROSENTHAL AND MAGGIE GRUNDY
FOUR WALLS

FOUR
4 WALLS
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FOUR WALLS Artists
Sixteen designers will be featured in the exhibition, including students from the College of Design and professional artists from throughout the country. Click on any of their photos below to learn about their approach to design and their contribution to this exhibition.

Hannah Rosenthal
Exhibition designer, Architecture graduate student
This entire exhibition is taking place because this young architect-in-training had a dream to make a difference. Consistently challenged to use her God-given talents to serve others, Hannah turned her thesis project into a city-wide service project in order to challenge her fellow designers to help people living in material poverty.
The banner and overall exhibition enclosure was Hannah's design contribution. In an effort to engender empathy for people who scavenge for the building blocks of their homes, Hannah relied on free or donated materials including shipping pallets, milk jugs and plastic sheets discarded on construction sites. The final design bespeaks a systematic chaos similar to what one might find in a slum village in India or under a bridge in Des Moines.

FOUR 4 WALLS
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Your WALLS are waiting...
If you're interested in making a bid on the artwork donated by our artists, please visit our online silent auction page. Every penny of what you spend on this artwork will go to support EMI2 and the ERP. The auction opens at 7:00 AM on Monday, April 6th and will close at 5:00 PM Saturday, April 20th.
All pieces can be picked up at the exhibition site, the middle roof terrace west of the Memorial Union, between 5:00 - 7:00 PM on Saturday, April 20th.
BROWSE THE AUCTION
Thank you to our corporate sponsors!
SAUER DANFOSS
AlphaCopies
& Print Centers
Choice Painting Decorating
WEITZ
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Questions? Comments? Ideas?
Get in touch with the exhibition coordinators through this form. We'd love to hear from you!
Name
Email
Subject
Message
Send
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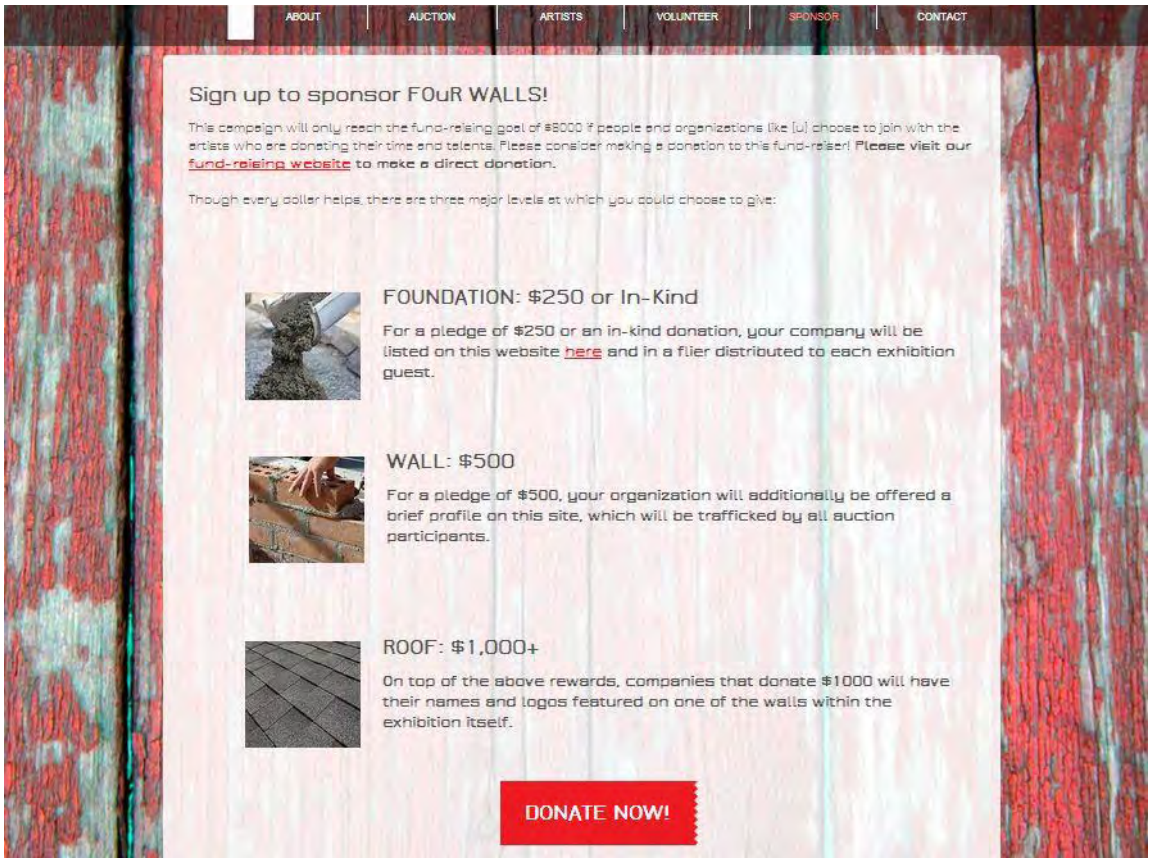
© 2012 BY HANNAH ROSENTHAL AND MAGGIE GRUNDY
FOUR 4 WALLS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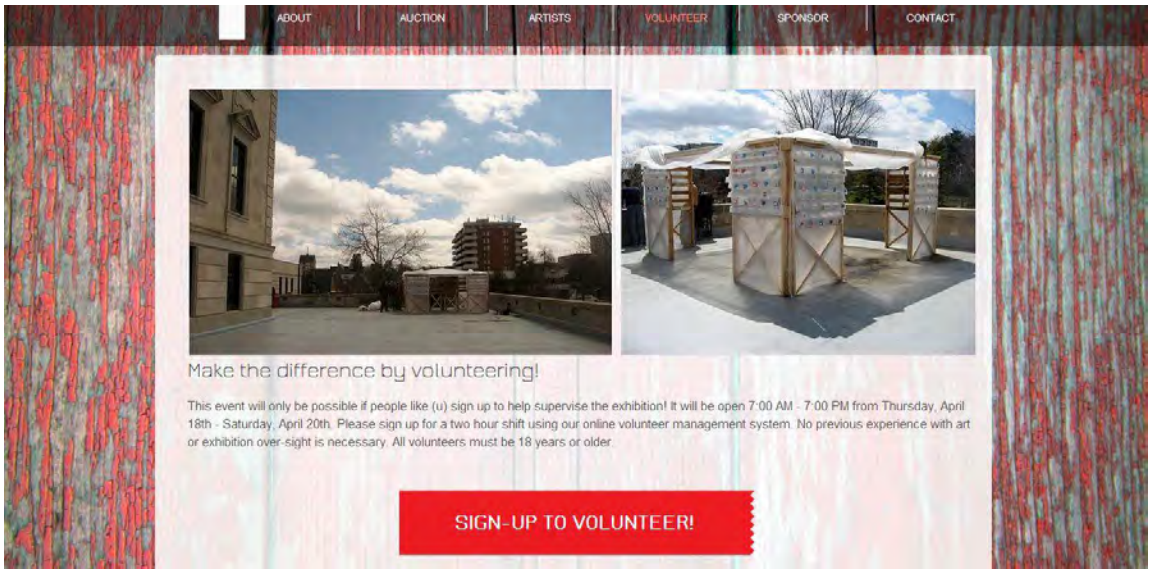
Sign up to sponsor FOuR WALLS!
This campaign will only reach the fund-raising goal of $6000 if people and organizations like (u) choose to join with the artists who are donating their time and talents. Please consider making a donation to this fund-raiser! Please visit our fund-raising website to make a direct donation.
Though every dollar helps, there are three major levels at which you could choose to give:
FOUNDATION: $250 or In-Kind
For a pledge of $250 or an in-kind donation, your company will be listed on this website here and in a flier distributed to each exhibition guest.
WALL: $500
For a pledge of $500, your organization will additionally be offered a brief profile on this site, which will be trafficked by all auction participants.
ROOF: $1,000+
On top of the above rewards, companies that donate $1000 will have their names and logos featured on one of the walls within the exhibition itself.
DONATE NOW!


ABOUT
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ARTISTS
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Make the difference by volunteering!
This event will only be possible if people like (u) sign up to help supervise the exhibition! It will be open 7:00 AM - 7:00 PM from Thursday, April 18th - Saturday, April 20th. Please sign up for a two hour shift using our online volunteer management system. No previous experience with art or exhibition over-sight is necessary. All volunteers must be 18 years or older.
SIGN-UP TO VOLUNTEER!

Facebook Group Documentation

Retrieved July 1, 2013

IRB Certification

Procured September 14, 2011

Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **Hannah Rosenthal** successfully completed the NIH Web-based training course "Protecting Human Research Participants".

Date of completion: 09/14/2011

Certification Number: 756555

IRB Application Approval

April 9, 2013

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
1138 Pearson Hall
Ames, Iowa 50011-2207
515 294-4566
FAX 515 294-4267

Date: 4/9/2013

To: Hannah Rosenthal
137 N Hyland Ave, Apt 33
Ames, IA 50014

CC: Dr. Nadia Anderson
156 College of Design
Cindy Gould
091 Design

From: Office for Responsible Research

Title: Four Walls Art Exhibition Participant Survey

IRB ID: 13-163

Study Review Date: 4/9/2013

The project referenced above has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b) because it meets the following federal requirements for exemption:

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey or interview procedures with adults or observation of public behavior where
  - Information obtained is recorded in such a manner that human subjects cannot be identified directly or through identifiers linked to the subjects; or
  - Any disclosure of the human subjects' responses outside the research could not reasonably place the subject at risk of criminal or civil liability or be damaging to their financial standing, employability, or reputation.

The determination of exemption means that:

- **You do not need to submit an application for annual continuing review.**
- **You must carry out the research as described in the IRB application.** Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any modifications to the research procedures (e.g., method of data collection, nature or scope of information to be collected, changes in confidentiality measures, etc.), modifications that result in the inclusion of participants from vulnerable populations, and/or any change that may increase the risk or discomfort to participants. Changes to key personnel must also be approved. The purpose of review is to determine if the project still meets the federal criteria for exemption.

  Non-exempt research is subject to many regulatory requirements that must be addressed prior to implementation of the study. Conducting non-exempt research without IRB review and approval may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.

  Detailed information about requirements for submission of modifications can be found on the Exempt Study Modification Form. A Personnel Change Form may be submitted when the only modification involves changes in study staff. If it is determined that exemption is no longer warranted, then an Application for Approval of Research Involving Humans Form will need to be submitted and approved before proceeding with data collection.

Please note that you must submit all research involving human participants for review. **Only the IRB or designees may make the determination of exemption**, even if you conduct a study in the future that is exactly like this study.

Please be aware that **approval from other entities may also be needed.** For example, access to data from private records (e.g. student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. **An IRB determination of exemption in no way implies or guarantees that**

permission from these other entities will be granted.

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.

IRB ID: 13-163

INSTITUTIONAL REVIEW BOARD (IRB)

Exempt Study Review Form

RECEIVED
MAR 29 2013
By IRB

Title of Project: Four Walls Art Exhibition Participant Survey		
Principal Investigator (PI): Hannah Rosenthal		Degrees: B. Architecture 2012 (ISU)
University ID: 392708316	Phone: 319-558-6793	Email Address: herosent@iastate.edu
Correspondence Address: 137 N Hyland Ave, Apt #3, Ames, IA 50014		
Department: Architecture		College/Center/Institute: College of Design

PI Level: ☐ Tenured, Tenure-Eligible, & NTER Faculty ☐ Adjunct/Affiliate Faculty ☐ Collaborator Faculty ☐ Emeritus Faculty
☐ Visiting Faculty/Scientist ☐ Senior Lecturer/Clinician ☐ Lecturer/Clinician, w/Ph.D. or DVM ☐ P&S Employee, P37 & above
☐ Extension to Families/Youth Specialist ☐ Field Specialist III ☐ Postdoctoral Associate ☒ Graduate/Undergrad Student ☐ Other (specify:)

FOR STUDENT PROJECTS (*Required when the principal investigator is a student*)		
Name of Major Professor/Supervising Faculty: Nadia Anderson		
University ID: 123999876	Phone: (515)-294-0339	Email Address: nanderso@iastate.edu
Campus Address: nanderso@iastate.edu		Department: Architecture
Type of Project: (check all that apply) ☒ Thesis/Dissertation	☐ Class Project	☐ Other (specify:)

Alternate Contact Person: Cindy Gould	Email Address: cgould@iastate.edu
Correspondence Address: cgould@iastate.edu	Phone: 515-290-6556

ASSURANCE

- I certify that the information provided in this application is complete and accurate and consistent with any proposal(s) submitted to external funding agencies. Misrepresentation of the research described in this or any other IRB application may constitute non-compliance with federal regulations and/or academic misconduct.
- I agree to provide proper surveillance of this project to ensure that the rights and welfare of the human subjects are protected. I will report any problems to the IRB. See Reporting Adverse Events and Unanticipated Problems for details.
- I agree that modifications to the approved project will not take place without prior review and approval by the IRB.
- I agree that the research will not take place without the receipt of permission from any cooperating institutions, when applicable.
- I agree to obtain approval from other appropriate committees as needed for this project, such as the IACUC (if the research includes animals), the IBC (if the research involves biohazards), the Radiation Safety Committee (if the research involves x-rays or other radiation producing devices or procedures), etc.
- I understand that approval of this project does not grant access to any facilities, materials or data on which this research may depend. Such access must be granted by the unit with the relevant custodial authority.
- I agree that all activities will be performed in accordance with all applicable federal, state, local, and Iowa State University policies.

[redacted] [redacted]

Signature of Principal Investigator Date

Signature of Major Professor/Supervising Faculty Date
(*Required when the principal investigator is a student*)

- I have reviewed this application and determined that departmental requirements are met, the investigator(s) has/have adequate resources to conduct the research, and the research design is scientifically sound and has scientific merit.

[redacted]

Signature of Department Chair Date

For IRB Use Only	☐ Not Research Per Federal Regulations	☐ No Human Participants	Review Date: April 9, 2013
	☐ Minimal Risk	EXEMPT Per 45 CFR 46.101(b): 2	
IRB Reviewer's Signature	[redacted]		

Exempt Study Information

Please provide *Yes* or *No* answers, except as specified. Incomplete forms will be returned without review.

Part A: Key Personnel

List all members and relevant qualifications of the project personnel. Key personnel includes the principal investigator, co-principal investigators, supervising faculty member, and any other individuals who will have contact with the participants or the participants' data (e.g., interviewers, transcribers, coders, etc.). This information is intended to inform the committee of the training and background related to the specific procedures that each person will perform on the project. For more information, please see Human Subjects - Persons Required to Obtain IRB Training.

NAME	Interpersonal contact or communication with subjects, or access to private identifiable data?	Involved in the consent process?	Contact with human blood, specimens, or other biohazardous materials?	Other Roles in Research	Qualifications (i.e., special training, degrees, certifications, coursework, etc.)	Human Subjects Training Date
Hannah Rosenthal	☒	☒	☐	Primary Investigator	B. Architecture 2012 (IIT), MS Architecture Candidate 2013 (ISU)	09/14/2011
Nadia Anderson	☐	☐	☐	Supervising Faculty Member	B. Arts 1988 (Yale), M. Architecture 1994 (UPenn), Licensed Architect (IL)	04/18/2010
	☐	☐	☐			
	☐	☐	☐			
	☐	☐	☐			
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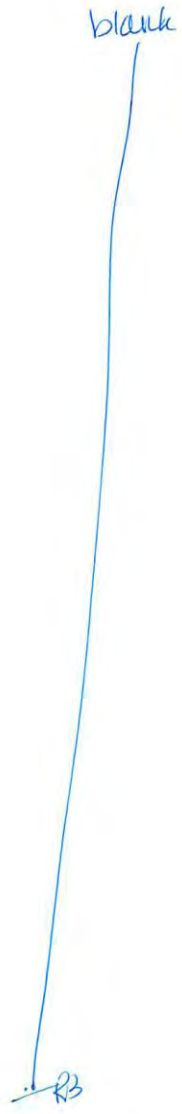
	☐	☐	☐			
	☐	☐	☐			

Please complete additional pages of key personnel as necessary.



Part B: General Overview

Please provide a brief summary of the purpose of your study:
FOuR WALLS is an art exhibition and auction being held on campus during VEISHEA to raise funds and awareness for non-profit organizations working to combat inequitable shelter in both New Delhi, India and Ames, Iowa. I anticipate approxiamately twenty-five artists will donate artwork to the cause. I would like to conduct a brief follow-up survey of the participating artists and anonymously survey participating volunteers and exhibition guests to help me identify the effectiveness of the project in making an impact. My written thesis revolves around the principle that architects and artists can make a powerful difference in the lives of the materially poor. I aim to use the results of this survey to supplement my literature review on the involvement of design professionals in the provision of equitable shelter. I hope to inevitably draw conclusions about the current role of design professionals in this area and for the expansion of this role.

Please provide a brief summary of your research design:
The qualitative portion of this research project will use surveys as instruments to gather participant feedback about the effectiveness of the event in raising awareness. There are three means of participating in this exhibition: as an artist, volunteer or exhibition guest. Each of these groups will be asked the same two questions about their understanding of equitable shelter so that their responses can be compared. The artists will also answer additional questions because their involvement is the most time-intensive and relevant to the thesis literature research about the design professions. These questions will include information about the artists' background, their reason(s) for signing up, how they heard about the event and what they learned about inequitable shelter through their participation. 1) Artists Artists will be asked in-person to complete a ten-minute survey when they drop off their artwork prior to the exhibition. The survey will be designed using a Google form and will be filled out on laptop stations. Every artist will be asked to participate in the survey with the goal of at least twenty-five responses. If twenty-five responses are not collected in person, the survey will be e-mailed to additional participating artists. Personal identifiers will be collected for the purposes of communicating with the artists in regards to their artwork final bid price and to send them a thank you note for their donation, not for the purposes of the research. 2) Volunteers The volunteers who aid in the construction and supervision of the exhibition will be asked in-person to complete a five-minute survey during their shift. This survey will be designed using a Google form and will be filled out on laptop stations with the goal of at least twenty-five responses. Personal identifiers will not be collected. 3) Exhibition Guests Guests who tour the exhibition during VEISHEA will be informed of the project goals via a banner and flier on display within the exhibition. Both survey questions will be written across the top of each banner and respondants will voluntarily write their answers on the banners beneath the heading. Guests will be allowed to tour the exhibition regardless of whether or not they participate in this component of the exhibition. Personal identifiers will not be collected.

* See addendum regarding means of obtaining data per PI email 4-5-13 (RS)
PI will not use Google Docs + will use Survey Monkey instead.

Part C: Exemption Categories

☐Yes	☒ No	1.	**Are you conducting research on Educational Practices (e.g., instructional techniques, curriculum effectiveness, etc.)? If *Yes*, please answer questions 1a through 1e. If *No*, please proceed to question 2.**
☐ Yes	☐ No	**1a.**	Will the research be conducted in an established or commonly accepted educational setting, such as a classroom, school, professional development seminar, etc.?
☐ Yes	☐No	**1b.**	Will the research be conducted in any settings that would **not** generally be considered to be established or commonly accepted educational settings? If *Yes*, please specify: _____
☐ Yes	☐No	**1c.**	Will the research procedures and activities involve normal educational practices (e.g., activities that normally occur in the educational setting)? Examples include research on regular or special education instructional strategies or the effectiveness of instructional techniques, curricula, or classroom management methods.
☐ Yes	☐No	**1d.**	Will the research procedures include anything **other than** normal educational practices? If *Yes*, please specify: _____
☐Yes	☐No	**1e.**	Will the procedures include randomization into different treatments or conditions, radically new instructional strategies, or deception of subjects? If *Yes*, please specify: _____

☒Yes	☐ No	2.	**Does your research involve use of educational tests, survey procedures, interview procedures, or observations of public behavior? If *Yes*, please answer questions 2a through 2c. If *No*, please proceed to question 3.**
☒ Yes	☐ No	**2a.**	Will the research involve one or more of the following? (Check all that apply.) ☐ The use of educational tests (cognitive, diagnostic, aptitude, achievement) ☒ Surveying or interviewing adults ☐ Observations of public behavior* of adults ☐ Observations of public behavior* of children, when the researcher will not interact or intervene with the children *Note: Activities occurring in the workplace and school classrooms are not generally considered to involve public behavior.
☐ Yes	☒No	**2b.**	Are **all** of the participants elected or appointed public officials or candidates for public office?

☐Yes	☒ No	3.	**Does the research involve the collection or study of *currently existing* data, documents, records, pathological specimens, or diagnostic specimens? If *Yes*, please answer questions 3a through 3c. If *No*, please proceed to question 4.**

☐ Yes ☐ No **3a.** Are **all** of the data, documents, records, or specimens **publicly** available?

☐ Yes ☐ No **3c.** Will the data you record for your study include ID codes? If *Yes*, please answer 3ci and 3cii.

☐ Yes ☐ No **3ci.** Does a "key" exist linking the ID codes to the identities of the individuals to whom the data pertains?

☐ Yes ☐ No **3cii.** Will any persons on the research team have access to this key?

☐ Yes ☒ No **4. Does your research involve Taste and Food Quality tests and Consumer Acceptance Studies involving food? If *Yes*, please answer questions 4a through 4c. If *No*, please proceed to question 5.**

☐ Yes ☐ No **4a.** Is the food to be consumed normally considered wholesome, such as one would find in a typical grocery store?

☐ Yes ☐ No **4b.** If the food contains additives, are the additives at or below the level normally considered to be safe by the FDA, EPA or Food Safety and Inspection Service of USDA? Consider additives in commercially available foods found at a grocery store and/or any additives that are added to food for research purposes.

☐ Yes ☐ No **4c.** If there are agricultural chemicals or environmental contaminants in the food, are they at or below the level found to be safe by the FDA, EPA or Food Safety and Inspection Service of USDA?

☐ Yes ☒ No **5. Is your study a research or demonstration project to examine**

- **Federal** public benefit or service programs such as Medicaid, unemployment, social security, etc.; or
- Procedures for obtaining benefits or service under these programs; or
- Possible changes in or alternatives to those programs or procedures; or
- Possible changes in methods or levels of payment for benefits or services under these programs?

☐ Yes ☐ No **5a.** If *Yes*, is the research or demonstration project pursuant to specific federal statutory authority?

Part C: Additional Information

☐ Yes ☒ No **6. Does your research involve any procedures that do not fit into one or more of the categories in items #1–#5 listed above, such as the following? (Check all that apply.)**

- ☐ Usability testing of websites, software, devices, etc.
- ☐ Collection of information from private records when identifiers are recorded
- ☐ Procedures conducted to induce stress, moods, or other psychological or physiological reactions
- ☐ Presentation of materials typically considered to be offensive, threatening, or degrading
- ☐ Video recording or photographing non-public behaviors
- ☐ Use of deception (e.g., misleading participants about the procedures or purpose of the study)
- ☐ Physical interventions, such as
  - ☐ blood draws
  - ☐ new collection of biological specimens
  - ☐ use of physical sensors (ECG, EKG, EEG, ultrasound, etc.)
  - ☐ exercise, muscular strength assessment, flexibility testing
  - ☐ body composition assessment
  - ☐ measuring of height and weight
  - ☐ x-rays
  - ☐ changes in diet or exercise
- ☐ Tests of sensory acuity (i.e., vision or hearing tests, olfactory tests, etc.)
- ☐ Consumption of food (other than as described in #4) or dietary supplements
- ☐ Clinical studies of drugs or medical devices
- ☐ Other; please specify: _____

☐ Yes ☐ No **6a.** If *Yes*, is your research conducted in an established educational setting, **and** are the checked procedures part of normal educational practices given that setting? If *Yes*, please describe:

_____

☐ Yes ☒ No **7. Do you intend or is it likely that your study will include any persons from the following populations? (Check all that apply.)**

- ☐ Prisoners
- ☐ Cognitively impaired
- ☐ Children (persons under age 18)
- ☐ Wards of the State
- ☐ Persons who are institutionalized

7 a. If *Yes*, please describe how they will be involved and what procedures they will complete:

_____

☒ Yes ☐ No **8. Will any of the following identifiers be *linked to the data* at any time point during the research? (Check all that apply.)**

☒ Names: ☐ First Name Only ☐ Last Name Only ☒ First and Last Name
☒ Phone/fax numbers
☐ ID codes that can be linked to the identity of the participant (e.g., student IDs, medical record numbers, account numbers, study-specific codes, etc.)
☒ Addresses (email or physical)
☐ Social security numbers
☐ Exact dates of birth
☐ IP addresses
☐ Photographs or video recordings
☐ Other; please specify: _____

☒ Yes ☐ No **9. Is there a reasonable possibility that participants' identities could be ascertained from any combination of information in the data? If *Yes*, please describe:** I am collecting atists' names and contact information for logistical purposes of the exhibition, not for the purposes of the survey. For example, each participating artist will have their name listed next to their artwork during VEISHEA to receive credit for the work that they donated.

10. If *Yes* to *either* #8 or #9 above, please answer the following:

☒ Yes ☐ No **10a. Will participants' identities be kept confidential when results of the research are disseminated?**

☐ Yes ☒ No **10b. Could any of the information collected, if disclosed outside of the research, reasonably place the subjects at risk of any of the following? (Check all that apply.)**

☐ Criminal liability
☐ Civil liability
☐ Damage to the subjects' financial standing
☐ Damage to the subjects' employability
☐ Damage to the subjects' reputation

☐ Yes ☒ No **10c. Does the research, directly or indirectly, involve or result in the collection of any information regarding any of the following? (Check all that apply.)**

☐ Use of illicit drugs
☐ Criminal activity
☐ Child, spousal, or familiar abuse
☐ Mental illness
☐ Episodes of clinical depression
☐ Suicidal thoughts or suicide attempts
☐ Health history
☐ History of job losses
☐ Exact household income other than in general ranges
☐ Negative opinions about one's supervisor, workplace, teacher, or others to whom the subject is in a subordinate position
☐ Opinions about race, gender, sexual orientation, or any other socially sensitive or controversial topics
☐ Sexual preferences or behaviors
☐ Religious beliefs
☐ Any other information that is generally considered to be private or sensitive given the setting of your research; if so, please specify: _____

After completion of Parts A, B, and C of this application, please send the completed form to:

Institutional Review Board (IRB)
Office for Responsible Research
1138 Pearson Hall
Ames, IA 50011-2200

Data collection materials (e.g., survey instruments, interview questions, recruitment and consent documents, etc.) do not need to be submitted with this application.

If you have any questions or feedback, please contact the IRB office at IRB@iastate.edu or 515-294-4566.

ADDENDUM
IRB ID 13-163
PI: Hannah Rosenthal
Communication from PI

1. Your application mentions using a Google form. Information provided to the IRB committee by our IT expert in the past, indicated that any information shared on Google Docs is subject to some sort of ownership by Google. I don't have all of the details about this, but due to the potential for research data to be subject to ownership by Google, have you considered whether a different platform would be adequate to distribute your survey? There are many investigators who use SurveyMonkey or Qualtrics and they seem to accomplish the same mission that you have. What are your thoughts on doing this or do you have any information about using Google Docs? I just want to ensure that your data is sufficiently being kept confidential.

I would be happy to use SurveyMonkey in place of Google forms. I had only specified Google forms because of my familiarity with the process. However, for the sake of retaining confidentiality, I can ask one of my current instructors, Monica Haddad, because she has lots of experience with SurveyMonkey.

2. Regarding the artist survey, will you be collecting the data in a way that the artist identifiers are separate from the survey data you collect? I am aware that there are settings in SurveyMonkey, for example, that allow for this; and it makes the data cleaner for ease of maintaining confidentiality. Another option would be to eliminate the identifiers from the survey and just have a separate sheet that the artists can write down their contact information. Please let me know if one of these options will work for you.

I will explore the options in SurveyMonkey, but I really do not need the artist identifiers apart from the logistical/managerial components of this exhibition. I'd be happy to collect contact information separately so that it is excluded from the survey.

3. When you ask the exhibition guests to sign the banners, would you be willing to have a sign and information on the flier indicating that they should only respond to the survey questions if they are 18 or older?

I do indeed plan to have a brief description posted next to the banner including the rule that minors do not participate. I will also have volunteers supervising participation to ensure that people abide by the posted guidelines.

Received by email 4/5/13 [rb]

E-mail announcement:

Dear fellow artists,

Have you ever created something beautiful that was inspired by something going horribly wrong? We artists have the ability to communicate powerful messages about injustice--have you ever tapped this potential?

If not, here's your chance.

An exhibition and auction taking place at ISU during VEISHEA could feature YOUR artwork. The exhibition is called FO(u)R WALLS because it aims to raise awareness about inequitable shelter in both India and the United States, and it cannot happen without (u). All proceeds from the auction will benefit non-profit organizations that provide shelter and design services for the materially poor.

Remember, artists MAKE the difference. Learn more and sign up to donate artwork at www.four-walls-isu.com.

Poster for the College of Design:

IRB Approved Informed Consent Forms

Used for Exhibition April 2013

CONSENT FORM FOR: FOUR WALLS ARTISTS

This form describes a research project. It has information to help you decide whether or not you wish to participate. Research studies include only people who choose to take part—your participation is completely voluntary. Please discuss any questions you have about the study or about this form with the project staff before deciding to participate.

Who is conducting this study?

This study is being conducted by Hannah Rosenthal, the exhibition organizer and a graduate student in the ISU architecture department.

Why am I invited to participate in this study?

You are being asked to take part in this study because you are an artist who has agreed to donate artwork to FOuR WALLS. You should not participate if you are under age 18.

What is the purpose of this study?

The purpose of this study is to evaluate how much you have learned through your participation in this exhibition and to help the exhibition organizers determine if/how this event should be repeated in future years.

What will I be asked to do?

If you agree to participate, you will be asked to fill out a ten-minute survey about your motivation for participating in this exhibition and what you learned through the process.

What are the possible risks and benefits of my participation?

There are no possible risks related to your participation in this research, nor are there any direct benefits. We hope that this research will benefit society by helping determine if FOuR WALLS was an effective strategy to raise awareness about inequitable shelter.

How will the information I provide be used?

The information you provide will be used for the sole purpose of drawing conclusions about the effectiveness of this exhibition within a graduate student's thesis project.

What measures will be taken to ensure the confidentiality of the data or to protect my privacy?

Records identifying participants will be kept confidential to the extent allowed by applicable laws and regulations. Records will not be made publicly available. However, federal government regulatory agencies, auditing departments of Iowa State University, and the ISU Institutional Review Board (a committee that reviews and approves research studies with human subjects) may inspect and/or copy your records for quality assurance and analysis. These records may contain private information.

To ensure confidentiality to the extent allowed by law, the following measures will be taken: The graduate student responsible for this project will be the only person with access to your information. Also, the final thesis paper will not link your personal identifiers with the qualitative answers you provide and the spreadsheet containing your personal information will be destroyed after the thesis is published in July 2013. If the results are published, your identity will remain confidential.

Will I incur any costs from participating or will I be compensated?

You will not have any costs from participating in this study. You will not be compensated for participating in this study.

What are my rights as a human research participant?

Participating in this study is completely voluntary. You may choose not to take part in the study or to stop participating at any time, for any reason, without penalty or negative consequences. You can skip any questions that you do not wish to answer. Your artwork will still be displayed during the exhibition regardless of whether or not you participate in this survey.

Whom can I call if I have questions or problems?

You are encouraged to ask questions at any time during this study.

- For further information about the study contact Hannah Rosenthal (319-558-6793) or Nadia Anderson (515-708-5089).
- If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, 1138 Pearson Hall, Iowa State University, Ames, Iowa 50011.

Consent and Authorization Provisions

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered. You will receive a copy of the written informed consent prior to your participation in the study.

Participant's Name (printed) _____

_____ _____

(Participant's Signature) (Date)

CONSENT FORM FOR: FOuR WALLS VOLUNTEERS

This form describes a research project. It has information to help you decide whether or not you wish to participate. Research studies include only people who choose to take part—your participation is completely voluntary. Please discuss any questions you have about the study or about this form with the project staff before deciding to participate.

This study is being conducted by Hannah Rosenthal, the exhibition organizer and a graduate student in the ISU architecture department. You are being asked to take part in this study because you are a volunteer who has agreed to assist in the construction or supervision of FOuR WALLS. **You should not participate in this survey if you are under age 18.**

The purpose of this study is to evaluate how much you have learned through your participation in this exhibition and to help the exhibition organizers determine if/how this event should be repeated in future years. **If you agree to participate, you will be asked to fill out a five-minute survey about your understanding of the term equitable shelter.**

There are **no possible risks** related to your participation in this research, nor are there any direct benefits. We hope that this research will benefit society by helping determine if FOuR WALLS was an effective strategy to raise awareness about inequitable shelter. The information you provide will be used for the sole purpose of drawing conclusions about the effectiveness of this exhibition within a graduate student's thesis project.

Records identifying participants will be kept confidential to the extent allowed by applicable laws and regulations. Records will not be made publicly available. However, federal government regulatory agencies, auditing departments of Iowa State University, and the ISU Institutional Review Board (a committee that reviews and approves research studies with human subjects) may inspect and/or copy your records for quality assurance and analysis. These records may contain private information.

To ensure confidentiality to the extent allowed by law, the following measures will be taken: The graduate student responsible for this project will be the only person with access to your responses. Additionally, the survey does not request any personal information that could link your answers to your identity, which is why **your identity will remain confidential** if the results are published.

You will not have any costs from participating in this study. You will not be compensated for participating in this study. Participating in this study is completely voluntary. You may choose not to take part in the study or to stop participating at any time, for any reason, without penalty or negative consequences. You can skip any questions that you do not wish to answer. You will still be allowed to volunteer during the exhibition regardless of whether or not you participate in this survey.

You are encouraged to ask questions at any time during this study.

- For further information about the study contact Hannah Rosenthal (319-558-6793) or Nadia Anderson (515-708-5089).
- If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, 1138 Pearson Hall, Iowa State University, Ames, Iowa 50011.

Consent and Authorization Provisions

Your anonymous participation in this Google form indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered.

Note for IRB Application: This information will be posted during the exhibition adjacent to the banners where the survey questions will be on display.

CONSENT FORM FOR: FOuR WALLS EXHIBITION GUESTS

This poster is a portion of a graduate student's research project. Please read the following information to help you decide whether or not you wish to participate. Research studies include only people who choose to take part—your participation is completely voluntary. Please discuss any questions you have about the study or about this form with the project staff before deciding to participate.

This study is being conducted by Hannah Rosenthal, the exhibition organizer and a graduate student in the ISU architecture department. You are being asked to take part in this study because you are an exhibition guest who has decided to answer the questions posted on this banner. **You should not participate in this survey if you are under age 18.**

The purpose of this study is to evaluate how much you have learned through your participation in this exhibition and to help the exhibition organizers determine if/how this event should be repeated in future years. **If you agree to participate, you will be asked to spend five minutes answering the questions on the banner about your understanding of the term equitable shelter.**

There are **no possible risks** related to your participation in this research, nor are there any direct benefits. We hope that this research will benefit society by helping determine if FOuR WALLS was an effective strategy to raise awareness about inequitable shelter. The information you provide will be used for the sole purpose of drawing conclusions about the effectiveness of this exhibition within a graduate student's thesis project.

Records identifying participants will be kept confidential to the extent allowed by applicable laws and regulations. Records will not be made publicly available. However, federal government regulatory agencies, auditing departments of Iowa State University, and the ISU Institutional Review Board (a committee that reviews and approves research studies with human subjects) may inspect and/or copy your records for quality assurance and analysis. These records may contain private information.

To ensure confidentiality to the extent allowed by law, the following measures will be taken: The graduate student responsible for this project will be the only person with access to your responses. Additionally, the survey does not request any personal information that could link your answers to your identity, which is why **your identity will remain confidential if the results are published.**

You will not have any costs from participating in this study. You will not be compensated for participating in this study. Participating in this study is completely voluntary. You may choose not to take part in the study or to stop participating at any time, for any reason, without penalty or negative consequences. You can skip any questions that you do not wish to answer. You will still be allowed to tour the exhibition regardless of whether or not you participate in this survey.

You are encouraged to ask questions at any time during this study.

- For further information about the study contact Hannah Rosenthal (319-558-6793) or Nadia Anderson (515-708-5089).
- If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, 1138 Pearson Hall, Iowa State University, Ames, Iowa 50011.

Consent and Authorization Provisions

By writing your answers to these questions on the posters, you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered.

Survey for Participating Artists

Approved April 9, 2013

FOuR WALLS Art Exhibition Survey Questions

These questions will be administered to members of each participant category: artists, volunteers and exhibition guests. The surveys for the artists and volunteers will be filled out electronically through a Google form. The questions for the exhibition guests will be answered on site during the exhibition.

Artist Survey:

1. First name
2. Last name
3. E-mail address
4. Phone number
5. Mailing Address
6. Age
    a. Note: All participants must be 18 years of age or older.
7. Sex
    a. Male
    b. Female
8. Highest level of education completed
    a. High school diploma in process
    b. High school diploma
    c. Bachelor's degree
    d. Master's degree
    e. Doctoral degree
9. Occupation (check all that apply)
    a. High school student
    b. College student
    c. Faculty member
    d. Architect
    e. Artist
    f. Other: _____
10. Country of origin:
    a. USA
    b. India
    c. Other: _____
11. Why were you interested in participating in this exhibition?
    a. (Blank space for them to fill in)
12. What was most impactful about your participation in this exhibition and auction?
    a. (Blank space for them to fill in)
13. Have you ever traveled to a developing country?
    a. Yes
        i. Which country?
        ii. How did that experience influence the artwork that you submitted for this exhibition?

b. No
    i. Would you like to one day? Explain your answer.

14. How did you define "equitable shelter" before participating in this exhibition?
    a. (Blank space for them to fill in)
15. How do you currently define "equitable shelter"?
    a. (Blank space for them to fill in)
16. Had you ever interacted personally with a homeless person before participating in this exhibition?
    a. Yes
        i. Please explain your previous interactions.
    b. No
        i. What prevented interactions with the homeless prior to this exhibition?
17. How likely are you to interact personally with a homeless person in the future?
    a. Very likely
    b. Likely
    c. Unlikely
    d. Very unlikely
18. Had you volunteered at a homeless shelter prior to this exhibition?
    a. Yes
        i. Please explain your previous volunteer experiences.
    b. No
        i. What previously prevented you from volunteering?
19. How likely are you to volunteer at a homeless shelter in the future?
    a. Very likely
    b. Likely
    c. Unlikely
    d. Very unlikely
20. Had you heard about Engineering Ministries International before this exhibition?
    a. Yes
    b. No
21. Had you heard about the Emergency Residence Project before this exhibition?
    a. Yes
    b. No
22. How many people have you told about your participation in this exhibition?
    a. None
    b. 1-5
    c. 6-10
    d. 11-20
    e. 21-30
    f. 31-40
    g. 41-50
    h. More than 50

Survey for Participating Volunteers and Exhibition Guests

Approved April 9, 2013

Volunteer Survey:

These questions will be asked anonymously as volunteers sign up to assist in the construction and supervision of the exhibition. Responses will not be linked to personal identifiers and will be given voluntarily.

1. How did you define "equitable shelter" before participating in this exhibition?
    a. (Blank space for them to fill in)
2. How do you currently define "equitable shelter"?
    a. (Blank space for them to fill in)

Exhibition Guest Survey:

These questions will be hung up on two separate posters within the exhibition. Exhibition guests will be invited to respond by anonymously writing their answer on the poster.

1. How did you define "equitable shelter" before participating in this exhibition?
    a. (Blank space for them to fill in)
2. How do you currently define "equitable shelter"?
    a. (Blank space for them to fill in)

Marketing Media

Poster distributed in February 2013

Artist Sign-up Booth in ISU CoD February 2013

Handout distributed during the exhibition April 18-20, 2013

EMI2
Non-profit Design Firm
New Delhi, India

Engineering Ministries International-India donates their professional services to people living in material poverty who are unable to pay the steep prices tied to the design of adequate facilities. The funds from this exhibition will help the firm hire two Indian student interns.

ERP
Homeless shelter
Ames, IA

The Emergency Residence Project provides housing for an average of 50 people each night in both their own facilities and in local motels. In addition to housing the homeless, the ERP runs a homeless prevention program funded exclusively by private donations.

Bid and donate at www.four-walls-ISU.com
Thursday, April 18th - Saturday, April 20th
Exhibition open daily from 7:00 AM - 7:00 PM
Art auction closes at 5:00 PM on Saturday

Hannah Rosenthal

Is the architecture graduate student responsible for organizing this exhibition. This young architect-in-training turned her thesis into a city-wide service project in order to challenge her fellow designers to help people living in material poverty.

Hannah's thanks are due to so many: her professors Nadia and Cindy, Vic Moss from the ERP, Dannah and Huberth from EMI2, Iowa State staff Corey, Tommy, Susie, Virgene, Colleen, and Mike, College of Design Dean Luis Rico-Gutierrez, Artist Manager Maggie Grundy, Volunteer Manager Simon Nielsen, all of the volunteers and artists, the students in Design Across Boundaries, her co-workers at HAILA, family and friends.

Above all, Hannah must credit her Heavenly Father, who first taught her to care for those whom this project serves.

This project was generously sponsored by:

Choice Painting Decorating
SAUER DANFOSS
WEITZ BUILD IN GOOD COMPANY.
HAILA
ARCHITECTURE STRUCTURE PLANNING
AlphaCopies & Print Centers
H.L.MUNN LUMBER CO.

ISU Daily Article Published February 19, 2013
Accessed online July 14, 2013

FOuR WALLS helps local communities as well as those abroad

Photo: Huiling Wu/ Iowa State Daily

Hannah Rosenthal, graduate in architecture, will hold an exhibition in the Memorial Union during VEISHEA.

More Information

Contact for questions: four.walls.isu@gmail.com
Register: visit, www.four-walls-isu.com, go to the artist page and locate the registration form
-must register by march 1st

Posted: Tuesday, February 19, 2013 12:00 am | *Updated: 5:13 pm, Fri Feb 22, 2013.*

By Emily Drees,emily.drees@iowastatedaily.com

Is it possible that art could potentially raise money and give back to not only the community of Ames but also to communities in need overseas? That is the question Hannah Rosenthal, master of science in architecture candidate, has decided to challenge with her senior thesis project. Rosenthal partnered up with Design Across Boundaries, a student-run organization on campus, to plan this project. The goal is to have students, faculty or anyone interested create artwork. This project's title FOuR WALLS is a pun, said Rosenthal. It has to do with what equitable shelter means to each person and has to do with the fact that some people don't have four walls and a roof over their head.

Rosenthal explained that the u is emphasized to show the importance for you as an individual, student body and community.

The pieces of artwork are to be auctioned off the week of Veishea. This money will then be donated to nonprofit organizations in both India and in Ames.

In Ames, the money will be put towards homeless shelters to use however it is deemed necessary. The money donated to India, however, will take on a slightly different focus.

Rosenthal traveled to India in 2011 to intern with Engineering Ministries International. She said Engineering Ministries International is a company of architects and engineers that design structures in hope that their designs eventually are built.

The company offers an internship program that relies on a lot of American and English students. Rosenthal said Engineering Ministries International wants to expand and have more Indian intern students, but the problem is that in India's culture, it is frowned upon to volunteer time and talent free of charge.

"Don't get me wrong; there are a lot of people in India doing great things and volunteering, but if you're an architect, it's very expected that you'll go make a lot of money, and that you won't donate your services to the poor," Rosenthal said. "So Indian students that do want to serve nonprofit organizations face a little bit of that cultural resistance, particularly from their families."

Rosenthal said these are the experiences that inspired a big part of this project. This money would help the American architecture firm hire Indian students to give them the opportunity to do social projects without being frowned upon.

"I felt an overwhelming sense of gratitude for what I've been given, not even what I've earned, because there are so many things in our lives that we have just been handed," Rosenthal said. Rosenthal explained that the reason behind her project is to show and educate people on what kind of poverty not only takes place in India, but in every culture, including Ames.

"If I can teach while helping my collegues and Indian students, then why not?" Rosenthal said. Though Rosenthal headed this project, she said it has turned into a group project. Rosenthal has networked with churches, artists and architecture firms.

"[Design Across Boundaries is a student organization that ties in a lot of different disciplines and a lot of people from different majors in order to work to develop an understanding of humanitarian issues, such as housing," said Zach Sunderland, senior in architecture and president of Design Across Boundaries. "[Design Across Boundaries] also focuses on and works on projects that help communities in need."

The organizations vision is to serve communities in need both locally and abroad. Both Rosenthal and Sunderland agreed to pair up on this project.

The group has teamed up with Rosenthal to set up the event, coordinate volunteers and possibly even design an instillation piece for the event.

“We always want to advocate for the people that are in need so we can bring attention as well as resources to them,” Sunderland said. “We also want to educate the people in our own communities so they can have a bigger vision of the world and be more informed.”

Rosenthal said that she not only sees an importance in fundraising for communities in need, but she also said she wants to challenge the designers for the project, mainly the architects. She hopes this project will spark people’s interest in what the phrase equitable shelter is and what it means to design equitable.

Rosenthal hopes this will challenge societies expectations of artists.

“Artists and designers make the difference,” Rosenthal said, “There’s a change that needs to happen in the world and artists have a role in that. We need to own it, and society needs to recognize it as well as expect it from us.”

Donation Receipt from Habitat for Humanity Restore

Received May 22, 2013 for the donation of approximately forty pieces of lumber from the exhibition enclosure (recycled 2x4s that were longer than 3'- 0").

On behalf of the Greater Des Moines Habitat for Humanity community I would express my thanks and appreciation for your donation of materials to ReStore. The donations we receive have a direct impact on affordable homeownership in our community. Your support also saves on a global scale as we tithe to Habitat for Humanity International in El Salvador.

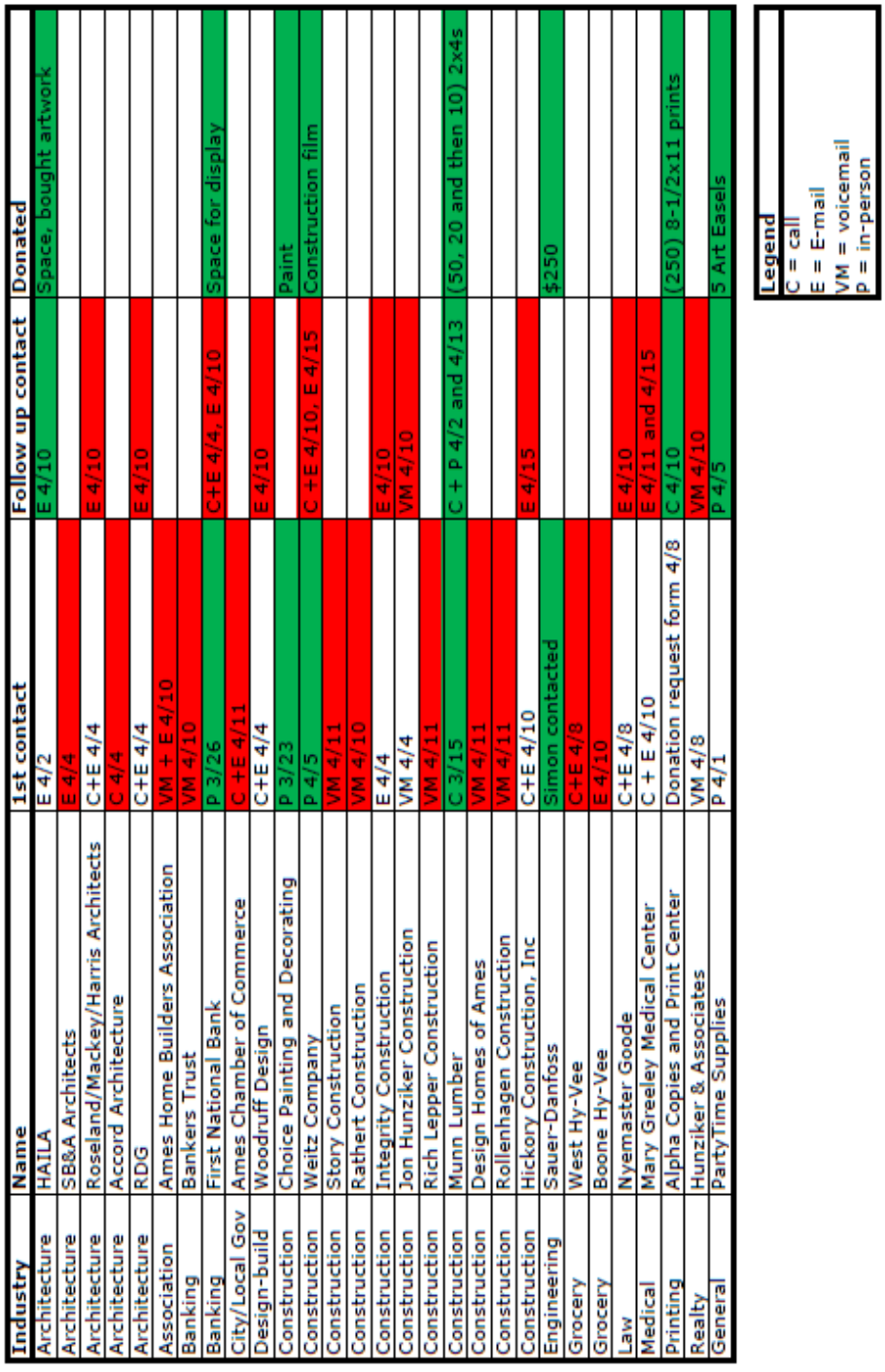
I hope the event went well and was a successful endeavor. Thank you for choosing to partner with us.

Sincerely,

[redacted]

Financial Partnership Contact Log

Last updated April 15, 2013



Industry	Name	1st contact	Follow up contact	Donated
Architecture	HAILA	E 4/2	E 4/10	Space, bought artwork
Architecture	SB&A Architects	E 4/4		
Architecture	Roseland/Mackey/Harris Architects	C+E 4/4	E 4/10	
Architecture	Accord Architecture	C 4/4		
Architecture	RDG	C+E 4/4	E 4/10	
Association	Ames Home Builders Association	VM + E 4/10		
Banking	Bankers Trust	VM 4/10		
Banking	First National Bank	P 3/26	C+E 4/4, E 4/10	Space for display
City/Local Gov	Ames Chamber of Commerce	C +E 4/11		
Design-build	Woodruff Design	C+E 4/4	E 4/10	
Construction	Choice Painting and Decorating	P 3/23		Paint
Construction	Weitz Company	P 4/5	C + E 4/10, E 4/15	Construction film
Construction	Story Construction	VM 4/11		
Construction	Rathert Construction	VM 4/10		
Construction	Integrity Construction	E 4/4	E 4/10	
Construction	Jon Hunziker Construction	VM 4/4	VM 4/10	
Construction	Rich Lepper Construction	VM 4/11		
Construction	Munn Lumber	C 3/15	C + P 4/2 and 4/13	(50, 20 and then 10) 2x4s
Construction	Design Homes of Ames	VM 4/11		
Construction	Rollenhagen Construction	VM 4/11		
Construction	Hickory Construction, Inc	C+E 4/10	E 4/15	
Engineering	Sauer-Danfoss	Simon contacted		$250
Grocery	West Hy-Vee	C+E 4/8		
Grocery	Boone Hy-Vee	E 4/10		
Law	Nyemaster Goode	C+E 4/8	E 4/10	
Medical	Mary Greeley Medical Center	C + E 4/10	E 4/11 and 4/15	
Printing	Alpha Copies and Print Center	Donation request form 4/8	C 4/10	(250) 8-1/2x11 prints
Realty	Hunziker & Associates	VM 4/8	VM 4/10	
General	PartyTime Supplies	P 4/1	P 4/5	5 Art Easels

Legend
C = call
E = E-mail
VM = voicemail
P = in-person